

1 STATE OF TENNESSEE  
2 DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT  
3 BOARD OF BOILER RULES  
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8 QUARTERLY MEETING OF THE  
9 STATE OF TENNESSEE  
10 BOARD OF BOILER RULES

11 September 18, 2019  
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18 ORIGINAL  
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22 -----  
23 CASSANDRA M. BEILING, LCR# 371  
24 STONE & GEORGE COURT REPORTING  
25 2020 Fieldstone Parkway  
Suite 900 - PMB 234  
Franklin, Tennessee 37069  
615.221.1089

Page 2

1 APPEARANCES:

2 Brian Morelock, Chairman  
Owner-User Representative

3

4 David W. Baughman  
Owner/User Representative

5 Allied Boiler & Supply, Inc.  
4006 River Lane

6 Milton, Tennessee 37118

7

8 Harold F. Bowers  
Insurance Representative  
Centerville, Tennessee

9

10 Terry Fox  
Boilermaker Representative  
Chattanooga, Tennessee

11

12

13 Dr. S. Keith Hargrove  
Mechanical Engineer Representative  
Goodlettsville, Tennessee

14

15 Sam Chapman, Chief Boiler Inspector

16

17 Chris O'Guin, Boiler Inspector

18

19 Thomas Herrod  
Assistant Commissioner, State of Tennessee

20

21 Daniel Bailey, Esq.  
Legal Counsel, State of Tennessee

22

23 Carlene Bennett  
Board Secretary, State of Tennessee

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1 X. Open Discussion Items

2 \* Doris Barnett - Jurisdiction Online report

3 \* Deborah Rhone - 2019 & 2020 Tennessee  
Boiler Safety Conference update

4

5 XI. Announcement of Next Meeting

6 The next regularly scheduled meeting of the  
Board of Boiler Rules will be held at  
7 9:00 a.m. (CST) on Wednesday, December 11,  
2019, at the State of Tennessee Department  
8 of Labor & Workforce Development building,  
located at 220 French Landing Drive,  
9 Nashville, Tennessee.

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11 XII. Adjournment.

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24 \*\* Reporter's Note: All names are spelled  
phonetically unless otherwise provided to the  
25 Reporter by the parties.

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I N D E X

1 19-14 American Snuff Company PAGE 14

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3 19-15 Cumberland Medical Center 27

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5 19-16 Carlex Glass America, LLC 49

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7 19-18 Quintus Technologies, LLC 58

8

9 19-19 Unilever NAIC 69

10

11 19-20 GRACE 75

12

A G E N D A

13 I. Call Meeting to Order

14 II. Introductions and Announcements

15 III. Adoption of the Agenda

16 IV. Approval of the June 12, 2019 Meeting  
Minutes

17

18 V. Chief Boiler Inspector's Report

19

20 VI. Variance Report

21

22 VII. Old Business

23 19-8 Parkwest Medical Center  
(moved to 12/11/19 meeting)

24

25 VIII. New Business

19-14 American Snuff Company

19-15 Cumberland Medical Center

19-16 Carlex Glass America, LLC

19-17 Nokian Tires U.S. Operations, LLC  
(moved to 12/11/19 meeting)

19-18 Quintus Technologies, LLC

19-19 Unilever NAIC - Covington Plant

19-20 GRACE

IX. Rule Case & Interpretations

BI 19-01 ECS Consulting, LLC requests  
interpretations

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2 CHAIRMAN MORELOCK: I want to

3 welcome everybody to our September Tennessee Board

4 of Boiler Rules meeting. We do have agendas on

5 the back table. If you'd like one, there's also

6 an attendance sheet on the back table if you need

7 to sign in. We'll also pass an attendance sheet

8 for the board members to sign in as well.

9

10 And so I would like to officially

11 call this meeting to order at this time. As far

12 as introductions and announcements, so I don't get

13 this backwards, like I'm known to do, we'll do the

14 introductions first, so we'll start with our court

15 reporter.

16 THE REPORTER: Cassandra Beiling

17 from Stone & George Court Reporting.

18 MS. BENNETT: Carlene Bennett,

19 board secretary.

20 MR. O'GUIN: Chris O'Guin,

21 assistant chief boiler inspector.

22 MR. CHAPMAN: Sam Chapman, chief

23 boiler inspector.

24 MR. HARGROVE: Good morning. Keith

25 Hargrove, board member.

CHAIRMAN MORELOCK: Brian Morelock,

<p style="text-align: right;">Page 6</p> <p>1 board member.</p> <p>2 MR. BAUGHMAN: Dave Baughman, board</p> <p>3 member.</p> <p>4 MR. BOWERS: Harold Bowers, board</p> <p>5 member.</p> <p>6 MR. HERROD: Tom Herrod, assistant</p> <p>7 commissioner.</p> <p>8 MR. BAILEY: Dan Bailey, legal</p> <p>9 counsel.</p> <p>10 And I would also like to take this</p> <p>11 moment to remind everybody that this is being</p> <p>12 transcribed, and as we discuss items to not talk</p> <p>13 over each other. Let the person asking the</p> <p>14 question ask the question before you start</p> <p>15 answering and things of that nature so that the</p> <p>16 record is clean.</p> <p>17 MR. REBER: I'm Rick Reber</p> <p>18 representing Quintus Technologies.</p> <p>19 MR. CANON: Jason Canon, CoorsTek.</p> <p>20 MS. RHONE: Deborah Rhone, boiler</p> <p>21 office supervisor.</p> <p>22 MR. NEVILLE: James Neville,</p> <p>23 Neville Engineering.</p> <p>24 MR. NICHELSON: Pete Nicholson,</p> <p>25 representing Unilever.</p>	<p style="text-align: right;">Page 7</p> <p>1 MR. STEWART: Will Stewart</p> <p>2 representing American Snuff.</p> <p>3 MR. KENDRICK: Rupert Kendrick,</p> <p>4 American Snuff.</p> <p>5 MR. CRAVENS: Jason Cravens</p> <p>6 representing Cumberland Medical Center.</p> <p>7 MR. SCOTT: Joey Scott representing</p> <p>8 Carlex Glass plant.</p> <p>9 MR. BOLTON: Mike Bolton</p> <p>10 representing Carlex Glass.</p> <p>11 MR. TOTH: Good morning. Marty</p> <p>12 Toth, ECS Consulting and the Boisco Training</p> <p>13 Group.</p> <p>14 CHAIRMAN MORELOCK: Thank you,</p> <p>15 everyone, for those introductions. As far as</p> <p>16 announcements go, Mr. Jeff Henry let us know that</p> <p>17 he would be unable to attend the September</p> <p>18 meeting, so he will not be here. We just found</p> <p>19 out this morning that Mr. Fox may be a little</p> <p>20 late, so even if something prevents him from</p> <p>21 coming, we still have a quorum with the four board</p> <p>22 members here.</p> <p>23 In the way of a safety item -- I</p> <p>24 always like to present that -- in the event of an</p> <p>25 emergency or a natural disaster, we have security</p>
<p style="text-align: right;">Page 8</p> <p>1 personnel in the building who will escort the</p> <p>2 attendees to a safe place either in the building</p> <p>3 or exiting the building on the Rosa Parks side if</p> <p>4 need be.</p> <p>5 As a courtesy to the presenters and</p> <p>6 to the board, I would ask that you silence your</p> <p>7 cell phones. And if you need to step out and take</p> <p>8 a quick phone call or something, that will be</p> <p>9 fine.</p> <p>10 And are there any other announcements</p> <p>11 that need to be made?</p> <p>12 (No verbal response.)</p> <p>13 CHAIRMAN MORELOCK: All right.</p> <p>14 Hearing none, we'll go to Item 3, which is</p> <p>15 adoption of the agenda.</p> <p>16 I do have some corrections to the</p> <p>17 agenda that I would like to add at this time.</p> <p>18 Under Old Business, Item 19-8 Parkwest Medical</p> <p>19 Center, they have asked to move this item from the</p> <p>20 September meeting to the December 11th, 2019</p> <p>21 meeting.</p> <p>22 The next item would be Item 19-17,</p> <p>23 Nokian Tyres. They, too, have requested to move</p> <p>24 this item from the September meeting agenda to the</p> <p>25 December 11th, 2019 meeting. And Item 19-21, it</p>	<p style="text-align: right;">Page 9</p> <p>1 has also been asked to move this item from the</p> <p>2 September meeting to the December 11 meeting</p> <p>3 agenda.</p> <p>4 Are there any other additions or</p> <p>5 corrections to the agenda?</p> <p>6 (No verbal response.)</p> <p>7 CHAIRMAN MORELOCK: Hearing none,</p> <p>8 do I have a motion to adopt the agenda as</p> <p>9 altered/changed?</p> <p>10 MR. BOWERS: Motion to adopt.</p> <p>11 MR. BAUGHMAN: Second.</p> <p>12 CHAIRMAN MORELOCK: Any other</p> <p>13 discussion?</p> <p>14 (No verbal response.)</p> <p>15 CHAIRMAN MORELOCK: I'll call the</p> <p>16 question. All in favor, say aye.</p> <p>17 (Affirmative response.)</p> <p>18 CHAIRMAN MORELOCK: Opposed?</p> <p>19 (No verbal response.)</p> <p>20 CHAIRMAN MORELOCK: Abstentions?</p> <p>21 (No verbal response.)</p> <p>22 CHAIRMAN MORELOCK: Not voting?</p> <p>23 (No verbal response.)</p> <p>24 CHAIRMAN MORELOCK: We have an</p> <p>25 approved agenda.</p>

<p style="text-align: right;">Page 10</p> <p>1 And not to leave Ms. Doris out, 2 Ms. Doris Barnett stepped in, so she is with us at 3 this time. So welcome. 4 MS. BARNETT: Thank you. 5 CHAIRMAN MORELOCK: All right. The 6 next item is Item 4, approval of the June 12, 2019 7 Tennessee board minutes. I hope you had a chance 8 to review those. Are there any corrections/ 9 revisions to the minutes? 10 (No verbal response.) 11 CHAIRMAN MORELOCK: Hearing none, 12 do I have a motion to accept these minutes? 13 MR. BAUGHMAN: So moved. 14 CHAIRMAN MORELOCK: Do I have a 15 second? 16 MR. BOWERS: Second. 17 CHAIRMAN MORELOCK: Any 18 discussions, questions? 19 (No verbal response.) 20 CHAIRMAN MORELOCK: Hearing none, 21 I'll call the question. All in favor say aye. 22 (Affirmative response.) 23 CHAIRMAN MORELOCK: Opposed? 24 (No verbal response.) 25 CHAIRMAN MORELOCK: Abstentions?</p>	<p style="text-align: right;">Page 11</p> <p>1 (No verbal response.) 2 CHAIRMAN MORELOCK: Not voting? 3 (No verbal response.) 4 CHAIRMAN MORELOCK: We have 5 approved minutes. That takes us to Item 5 on the 6 agenda, the chief boiler inspector's report. I'll 7 turn that over to Chief Boiler Inspector Chapman. 8 MR. CHAPMAN: Thank you. 9 Our number of inspections, state 10 inspections preformed, 3,898. The insurance 11 agents performed 4,994, giving us a total of 12 8,892. Total delinquent: Number of vessels is we 13 have 71,776; state inspectors with delinquent is 14 1,188; insurance agents is 388, giving us a total 15 delinquent 1,576. 16 Number of code violations: 17 Violations found was 35; uncorrected violations 18 was 17. 19 This report is covering from April 20 through June of 2019. The variance report will be 21 performed by -- reported on by Assistant Chief 22 Chris O'Guin. 23 We have a new inspector, Mike McKee. 24 McKee will cover the West Tennessee area. 25 And that is the chief's report.</p>
<p style="text-align: right;">Page 12</p> <p>1 CHAIRMAN MORELOCK: Any questions 2 or comments about the chief's report? 3 (No verbal response.) 4 CHAIRMAN MORELOCK: All right. 5 Thank you. 6 Mr. Fox, thank you for joining us. 7 MR. FOX: Thank you, Chairman. 8 CHAIRMAN MORELOCK: I had to put 9 you on the minutes as being late, so I wanted to 10 catch you the minute you were here. 11 MR. FOX: Thank you. 12 CHAIRMAN MORELOCK: So, good to 13 have you. 14 All right. Our next item is Item 6 15 which is the variance report, and we'll let 16 Assistant Chief O'Guin report on that. 17 MR. O'GUIN: Thank you, Chairman. 18 As of to date, we have 120 known 19 variances, 7 that require a follow-up inspection, 20 62 are active, 10 require a reinspection, and 41 21 are dormant. 22 Last quarter we completed 4 variance 23 audits with 4 approved: UT Memphis, Buckman, 24 Tenova North, and Murray Regional. 25 That's all.</p>	<p style="text-align: right;">Page 13</p> <p>1 CHAIRMAN MORELOCK: Okay. Any 2 questions or comments about the variance report? 3 MR. BOWERS: I notice there's a big 4 difference between active and dormant. How do we 5 get the ones that are dormant -- I mean -- 6 MR. O'GUIN: Dormant means they've 7 never reapplied for a variance. It's ones that 8 way in the past have had a variance and they've 9 never reapplied for it. 10 MR. BOWERS: So we just carry that 11 number forever? 12 MR. O'GUIN: We just keep it on 13 there, yes. 14 MR. BOWERS: Okay. 15 CHAIRMAN MORELOCK: Good question. 16 Any other questions or comments? 17 (No verbal response.) 18 CHAIRMAN MORELOCK: All right. 19 Thank you, sir. 20 Moving on to Item 7, which is old 21 business. And we've already moved that to the 22 December meeting, so we'll move on to Item 8, 23 which is new business. 24 And before I get into the new 25 business, I did want to say when you come up to</p>

<p style="text-align: right;">Page 14</p> <p>1 present your item, speak clearly so we can record  2 your presentation, and we also -- let's give these  3 presenters courtesy. As Mr. Bailey said, let's  4 not talk over each other, and give them an  5 opportunity to present. People in the audience  6 are able to make comments and ask questions as  7 well.</p> <p>8           19-14 American Snuff is requesting a  9 variance for five high-pressure boilers.</p> <p>10           So if you'll introduce yourself and  11 present your item.</p> <p>12           MR. BAILEY: Mr. Chairman, any  13 conflicts?</p> <p>14           CHAIRMAN MORELOCK: Thank you.  15 Are there any conflicts?  16 (No verbal response.)</p> <p>17           CHAIRMAN MORELOCK: All right. Go  18 ahead.</p> <p>19           MR. TOTH: Thank you, Mr. Chairman,  20 members of the board. My name is Marty Toth. I'm  21 with ECS Consulting and representing American  22 Snuff out of Clarksville. I'm honored to have  23 with me today, also representing American Snuff,  24 Mr. Will Stewart and Mr. Rupert Kendrick.  25           Mr. Stewart is the senior manager of</p>	<p style="text-align: right;">Page 15</p> <p>1 technical support for American Snuff. And as you  2 will see in the manual, he's also responsible for  3 the manual updates. Mr. Doss, who is the signer  4 of the request letter, was unable to attend today.  5 But Mr. Stewart is well knowledgeable with the  6 operations and the manual, and will be able to  7 represent and answer any questions that you have  8 of him.</p> <p>9           Also, Mr. Kendrick is the production  10 supervisor that's closely related to the  11 operations that you will recognize on the org  12 chart, page 26.</p> <p>13           As was mentioned, American Snuff has  14 five high-pressure boilers that operate on their  15 campus in three separate boiler locations. Of  16 those, we have three 200 horsepower and two  17 500 horsepower Cleaver-Brooks boilers. Those  18 boilers all operate on natural gas.</p> <p>19           They also have three low-pressure  20 boilers, which are mentioned in the manual. As we  21 all are aware, low-pressure boilers are not  22 required to be included as a variance; however,  23 American Snuff has taken upon themselves to add  24 additional safety features for the ability to  25 emergency stop those boilers at a remote location,</p>
<p style="text-align: right;">Page 16</p> <p>1 as you can see from the illustration of the remote  2 panel.</p> <p>3           All the boilers operate with the  4 Honeywell RM7800 Flame Safeguard and also include  5 the Cleaver-Brooks Hawk ICS system. And they also  6 have level master controls for additional water  7 level safety.</p> <p>8           The plant, actually, at this time,  9 operates at a 24/5 period. But as Mr. Stewart and  10 Mr. Kendrick can elaborate on, it is seasonal. So  11 if you have any questions about that, they'll be  12 more than happy to answer those questions.</p> <p>13           The remote station for American Snuff is  14 located at the rear entrance guard house that is  15 manned 24/7.</p> <p>16           As you will also notice, that they  17 utilize security guards as their boiler guards,  18 which are and will be qualified boiler attendants  19 for those off hours.</p> <p>20           And I'll be more than happy to answer  21 any questions you may have.</p> <p>22           CHAIRMAN MORELOCK: Do I have a  23 motion to discuss?</p> <p>24           MR. BOWERS: Motion to discuss.  25           MR. BAUGHMAN: Second.</p>	<p style="text-align: right;">Page 17</p> <p>1           CHAIRMAN MORELOCK: Okay. What  2 questions/comments does the board have for this  3 variance?</p> <p>4           MR. HARGROVE: In this particular  5 report and, I think, maybe upcoming ones, can you  6 provide clarity between a boiler attendant and  7 remote attendant with regard to training and  8 responsibility?</p> <p>9           MR. TOTH: Yes. Yes, sir, I can.  10 But if I may add, that information is located  11 within the individual sections, of Section 3 for  12 remote attendant and Section 4, for boiler  13 attendant.</p> <p>14           MR. HARGROVE: Okay.</p> <p>15           MR. TOTH: That gives a list of the  16 information that they will be trained on. And I  17 would be more than happy to direct that to you at  18 this time if you would like. So if we were to  19 look, you will find that information on page 5 for  20 remote attendant under --</p> <p>21           MR. HARGROVE: Page 6 with regard  22 to duties, right?</p> <p>23           MR. TOTH: Let me make sure I've  24 got the right book. No. It's -- you should be  25 under page 5 for training. I believe that's what</p>

<p style="text-align: right;">Page 18</p> <p>1 your question was.</p> <p>2 MR. HARGROVE: Okay.</p> <p>3 MR. TOTH: So for the remote</p> <p>4 attendant, here is a list of what the remote</p> <p>5 attendant will be trained on.</p> <p>6 And then under Section 4, if we were</p> <p>7 to go to page 9, it lists the training</p> <p>8 requirements for the boiler attendant.</p> <p>9 I will mention to you that during the</p> <p>10 manual review, I did notice that there were a</p> <p>11 couple of omissions. Number one -- I'll point</p> <p>12 that out now -- they have been changed in the</p> <p>13 master document and will be revised and sent to</p> <p>14 the chief.</p> <p>15 On page 8, it reads -- under Part B,</p> <p>16 you will see a list of those individuals at</p> <p>17 American Snuff that would serve and be qualified</p> <p>18 as a boiler attendant. I failed to include the</p> <p>19 boiler guard, which has been added to that list.</p> <p>20 And also, the communications and the</p> <p>21 training of communications is via phone, not</p> <p>22 radio. So that has been revised as well.</p> <p>23 MR. HARGROVE: I did want to also</p> <p>24 commend the piping configuration graphics. That</p> <p>25 was well done.</p>	<p style="text-align: right;">Page 19</p> <p>1 MR. TOTH: Well, thank you.</p> <p>2 MR. HARGROVE: Very descriptive in</p> <p>3 terms of its operation.</p> <p>4 MR. TOTH: Thank you.</p> <p>5 CHAIRMAN MORELOCK: Other</p> <p>6 questions, comments?</p> <p>7 MR. BAUGHMAN: Go ahead.</p> <p>8 CHAIRMAN MORELOCK: I just have a</p> <p>9 few typos and a couple of questions.</p> <p>10 MR. TOTH: Sure.</p> <p>11 CHAIRMAN MORELOCK: As far as</p> <p>12 relating to time frame and clarity, the cover</p> <p>13 letter states that this will be presented at the</p> <p>14 June 12th meeting. You might want to update that</p> <p>15 to the September 18 meeting.</p> <p>16 MR. TOTH: That is a very good</p> <p>17 question, Mr. Chairman. I'm glad you brought that</p> <p>18 up, because in times past, the cover letter was</p> <p>19 the date of submission. If we need to update</p> <p>20 those as somebody pushes as in regard to Parkwest</p> <p>21 or Nokian Tyres, I would be more than happy to.</p> <p>22 It's kind of confusing if we say, "Well, we</p> <p>23 submitted back in March or June."</p> <p>24 CHAIRMAN MORELOCK: Right.</p> <p>25 MR. TOTH: You know, does it really</p>
<p style="text-align: right;">Page 20</p> <p>1 matter if it's presented in December? But if we</p> <p>2 need to do that, we'll be more than happy to.</p> <p>3 CHAIRMAN MORELOCK: Well, probably,</p> <p>4 the best thing we can do for clarity on the board</p> <p>5 is we will add that as an agenda item to the</p> <p>6 December meeting to discuss that as a board.</p> <p>7 MR. TOTH: That would be great.</p> <p>8 CHAIRMAN MORELOCK: And we'll come</p> <p>9 up with some guidelines for that.</p> <p>10 MR. TOTH: Yeah. Because we want</p> <p>11 to make sure that we're comfortable with that.</p> <p>12 And I'll make sure that this is updated, and I'll</p> <p>13 have Mr. Doss resign the document and include it</p> <p>14 into the book.</p> <p>15 CHAIRMAN MORELOCK: Okay. Very</p> <p>16 good.</p> <p>17 MR. TOTH: Thank you.</p> <p>18 CHAIRMAN MORELOCK: Okay. On</p> <p>19 Figure 1 for your site plan.</p> <p>20 MR. TOTH: Yes.</p> <p>21 CHAIRMAN MORELOCK: I am getting</p> <p>22 old. It's just hard for me to locate the boilers.</p> <p>23 MR. TOTH: Okay. Okay.</p> <p>24 Absolutely. Absolutely. I do see what you're</p> <p>25 referring to in the way of the lines. Yes. Would</p>	<p style="text-align: right;">Page 21</p> <p>1 you like for me to point where those are at or...</p> <p>2 CHAIRMAN MORELOCK: No. Just --</p> <p>3 MR. TOTH: Okay. In the future,</p> <p>4 let's make those a little bit more bold.</p> <p>5 CHAIRMAN MORELOCK: Yes.</p> <p>6 MR. TOTH: So, as you can see, with</p> <p>7 the campus spanning 211 acres, we wanted to make</p> <p>8 sure and get the site plan within at least the one</p> <p>9 page.</p> <p>10 CHAIRMAN MORELOCK: Absolutely.</p> <p>11 MR. TOTH: But we can definitely</p> <p>12 make it more visible, and I will make sure that</p> <p>13 that's done.</p> <p>14 CHAIRMAN MORELOCK: I appreciate</p> <p>15 that.</p> <p>16 And you've already answered one of my</p> <p>17 questions, is with the fact that the remote</p> <p>18 station monitors, both the high-pressure and the</p> <p>19 low-pressure --</p> <p>20 MR. TOTH: Yes.</p> <p>21 CHAIRMAN MORELOCK: -- boilers,</p> <p>22 which is commendable. I think that's really good.</p> <p>23 So you've answered that question.</p> <p>24 On page 5, I think you've addressed</p> <p>25 this one, too. But let me go to that right quick.</p>

<p style="text-align: right;">Page 22</p> <p>1 It says, "Remote attendant can be any position 2 assigned by American Snuff Company management." 3           So is that just limited to the four 4 positions in Appendix G, or are there other 5 positions that would need to be added to 6 Appendix G, if you're going to say anybody. 7           MR. TOTH: Right. And that's a 8 very good question. Usually, that's put in as a 9 placeholder for if there's a need to change the 10 process of what those positions would be. And 11 this is an assumption on my part, so please 12 correct me if I'm wrong. As long as those 13 individuals in their job descriptions are 14 sufficient and spell out the responsibilities, 15 it's not necessary to bring that before the board. 16           CHAIRMAN MORELOCK: I agree. 17           MR. TOTH: Okay. And so this was a 18 placeholder so if American Snuff chooses to train 19 someone else in those positions, we can do so and 20 then make a revision to the manual and list those. 21           CHAIRMAN MORELOCK: Okay. And then 22 as far as on page 7, you discuss about actuating 23 an e-stop or resetting an e-stop, it says, by 24 pulling. 25           MR. TOTH: Uh-huh.</p>	<p style="text-align: right;">Page 23</p> <p>1           CHAIRMAN MORELOCK: And in some of 2 your other manuals, it says activation of it, 3 so... 4           MR. TOTH: By pulling? In some of 5 the manuals-- and it really depends upon what 6 e-stop is being used. A lot of the designs that I 7 put together and are commissioned to have built, 8 we utilize the twist-to-reset. 9           CHAIRMAN MORELOCK: Okay. 10          MR. TOTH: And these particular 11 e-stops are pull-to-reset. 12          CHAIRMAN MORELOCK: Okay. 13          MR. TOTH: So it's -- yeah. 14 Actually, it's a different function, so that's 15 when we spell it out. 16          CHAIRMAN MORELOCK: So, I mean, 17 whether you want to be specific or just say 18 activation, which is more general -- it's your 19 manual. I'm just -- consistency is good, too. So 20 it's just a comment. 21          MR. TOTH: Do you see it in the 22 different verbiage in this manual? 23          CHAIRMAN MORELOCK: I do. 24          MR. TOTH: So then that's my 25 responsibility --</p>
<p style="text-align: right;">Page 24</p> <p>1           CHAIRMAN MORELOCK: Well, I see it 2 in some of the other manuals. 3           MR. TOTH: Some of the other 4 manuals, I do -- I try to be very specific as to 5 what the function is. I don't want to say "pull" 6 if it's not pull. I want to -- 7           CHAIRMAN MORELOCK: Okay. 8           MR. TOTH: Because we're going to 9 train the individuals on the proper function. 10          If we say hey, and they're used to 11 maybe pulling an e-stop, and they go to start 12 pulling on one that's twist, it's not going to 13 pull. 14          CHAIRMAN MORELOCK: Okay. 15          MR. TOTH: So I'm very specific 16 about those. 17          CHAIRMAN MORELOCK: Very good. 18 Very good. And that's all the comments I have. 19          What other comments? 20          MR. BAUGHMAN: Mr. Toth? 21          MR. TOTH: Sir? 22          MR. BAUGHMAN: It describes the 23 remote station as being located in the production 24 area. 25          MR. TOTH: That is another error</p>	<p style="text-align: right;">Page 25</p> <p>1 that was located during manual review that has 2 since been revised. 3          MR. BAUGHMAN: Okay. 4          MR. TOTH: I do apologize for that, 5 but I knew that one would get caught. 6          MR. BAUGHMAN: And the other 7 question I have is that in the manual, it mentions 8 a back gate, but I don't see the back gate on the 9 site plan, so I was curious as to where it's 10 located. 11          MR. TOTH: Okay. Absolutely. So 12 if you -- in looking at the site plan, in the 13 upper-left area is going to be the administrative 14 building, the offices. So that would be 15 considered the front. The back gate, because -- 16 there is a gate there; however, there is a 17 check-in at the guard station, there, at the admin 18 building. 19          The back gate is not listed as back 20 gate or rear gate. If you feel that we should 21 title that as rear gate, I would be more than 22 happy to do that. 23          MR. BAUGHMAN: But where is the 24 rear gate, the back gate as it's described in the 25 manual. Where is it located?</p>

<p style="text-align: right;">Page 26</p> <p>1 MR. TOTH: The guard shack.  2 MR. BAUGHMAN: The guard shack.  3 Okay. Thank you.  4 CHAIRMAN MORELOCK: Any other  5 questions or comments?  6 MR. BAUGHMAN: The e-stops on this,  7 I notice there's quite a distance. Everything is  8 hardwired --  9 MR. TOTH: Oh, yes.  10 MR. BAUGHMAN: -- so we're not  11 doing true communications.  12 MR. TOTH: As a matter of fact, the  13 contractor that was commissioned to do that, I  14 actually walked it with him. So I got my cardio  15 for that day. And so that's all been done  16 hardwired, yes, sir.  17 MR. BAUGHMAN: Very good. That's  18 it.  19 CHAIRMAN MORELOCK: Any other  20 questions or comments?  21 (No verbal response.)  22 CHAIRMAN MORELOCK: Hearing none,  23 we need a motion to approve this variance  24 contingent on revisions to the manual based on  25 comments made during the Tennessee board meeting</p>	<p style="text-align: right;">Page 27</p> <p>1 and a successful site visit by the boiler unit.  2 MR. BAUGHMAN: So moved.  3 CHAIRMAN MORELOCK: Do I have a  4 second?  5 MR. BOWERS: Second.  6 CHAIRMAN MORELOCK: Any further  7 discussion?  8 (No verbal response.)  9 CHAIRMAN MORELOCK: Hearing none,  10 I'm going to call the question. All in favor, say  11 aye.  12 (Affirmative response.)  13 CHAIRMAN MORELOCK: Opposed?  14 (No verbal response.)  15 CHAIRMAN MORELOCK: Abstentions?  16 (No verbal response.)  17 CHAIRMAN MORELOCK: Not voting?  18 (No verbal response.)  19 CHAIRMAN MORELOCK: Gentlemen, you  20 have a contingently approved variance.  21 MR. STEWART: Thank you.  22 MR. KENDRICK: Thank you.  23 CHAIRMAN MORELOCK: That takes us  24 to Item 19-15, Cumberland Medical Center. They're  25 requesting a new variance for four high-pressure</p>
<p style="text-align: right;">Page 28</p> <p>1 boilers.  2 So if you will come forward,  3 introduce yourself, and present your item.  4 MR. TOTH: Thank you, Mr. Chairman.  5 I'm happy to have with me Mr. Jason Cravens.  6 Mr. Cravens is a senior facilities service  7 technician with Cumberland Medical Center out of  8 Crossville, Tennessee. Cumberland Medical Center  9 is a full-service hospital, regional hospital,  10 there in Crossville.  11 Currently, they have four  12 high-pressure boilers that are operating. Three  13 of those are 125-horsepower Kewanees with one  14 200 horsepower Cleaver-Brooks. They operate on  15 both natural gas with a back-up fuel source of  16 Number 2 fuel oil. Two of the four -- and you  17 will notice that this will be an editorial, so I  18 will explain that here in a moment. But two of  19 the four utilize the Hawkeye E110 Flame Safeguard  20 system with the EP160 programmer module.  21 The other two boilers, Boilers  22 Number 3 and Number 4 in your diagram, utilize the  23 Honeywell RM7800 Flame Safeguard. The  24 Cleaver-Brooks 200 horsepower boiler also has a  25 level master for additional level safety.</p>	<p style="text-align: right;">Page 29</p> <p>1 At this location, though, they do  2 have a deaerator. It is an atmospheric deaerator  3 so it is not registered with the State. It  4 operates less than 5 psi. The PBX -- as you can  5 see from the site plan, the PBX is the remote  6 station where the remote panel is located and will  7 be manned 24/7 by a PBX operator. The site plan  8 also shows you that the PBX office is located on  9 the third floor; whereas the boiler room's on the  10 first floor, very simple, very quick route to get  11 from one to the other by way of the mid-hospital  12 elevators or stair system if necessary.  13 Right now, as I mentioned, the  14 boilers are operated on a 24/7 basis. I would say  15 Mr. Cravens, the time that I've been able to spend  16 with him, is very knowledgeable in its operation  17 and will be more than happy to answer any  18 additional questions you may have. And we'll go  19 from there.  20 Oh, also, I'll mention, during off  21 hours, there is -- they utilize a boiler guard.  22 That boiler guard will be certified for Cumberland  23 Medical Center as a boiler attendant.  24 CHAIRMAN MORELOCK: Okay. Do I  25 have a motion to discuss?</p>

<p style="text-align: right;">Page 30</p> <p>1 MR. FOX: I'll make a motion to 2 discuss.</p> <p>3 MR. BAUGHMAN: Second. 4 MS. BENNETT: Mr. Morelock, 5 conflicts?</p> <p>6 CHAIRMAN MORELOCK: Are there any 7 conflicts on this item? 8 (No verbal response.) 9 CHAIRMAN MORELOCK: I'll take that 10 as none. 11 What questions, comments do you have? 12 (No verbal response.) 13 CHAIRMAN MORELOCK: Mr. Toth, the 14 only comments I have is the same editorial I had 15 on the last one. On page 6, you are pushing the 16 button; on page 10, you're activating the button. 17 That's the only comments I have. 18 MR. TOTH: Pushing and activating. 19 Yes, sir. 20 CHAIRMAN MORELOCK: Any other 21 questions or comments? 22 MR. HARGROVE: If I may ask, can 23 you describe your daily duties and 24 responsibilities relating to the variance request? 25 MR. CRAVENS: Daily, I'm usually</p>	<p style="text-align: right;">Page 31</p> <p>1 the first one to arrive, so I do the morning 2 checks, do low-water. We usually run two to 3 three, actively, 24 hours a day, 7 days a week. 4 We do have a little bit of reserve capacity, so we 5 do cycle some and keep them exercised. So I take 6 care of that. I'm responsible for the chemicals, 7 for the conductivity checks and the procedures 8 like that, and then logging the data. 9 MR. HARGROVE: And that's first 10 shift, second shift, third shift? 11 MR. CRAVENS: That is first shift. 12 MR. HARGROVE: Okay. Thank you. 13 MR. CRAVENS: Thank you. 14 MR. BAUGHMAN: Mr. Toth? 15 MR. TOTH: Yes, sir? 16 MR. BAUGHMAN: Can you direct me? 17 And I haven't been able to -- never mind. I just 18 found it. Thank you. I was looking for the 19 hardware aspect. 20 So, sir, you say you check your low 21 waters when you go in. 22 MR. CRAVENS: Yes, sir. 23 MR. BAUGHMAN: Primary low water? 24 MR. CRAVENS: Yes, sir. 25 MR. BAUGHMAN: Okay. Does it</p>
<p style="text-align: right;">Page 32</p> <p>1 activate back to the station? 2 MR. CRAVENS: Yes, sir. 3 MR. BAUGHMAN: Okay. So your 4 primary low water gives off a boiler alarm and you 5 go through the procedure at that time? 6 MR. CRAVENS: Yes, sir. 7 MR. BAUGHMAN: Very good. Thank 8 you. 9 Under Appendix I on page 34, Boiler 10 Attendant, boiler guard is not listed. 11 MR. TOTH: Yes, sir. That is 12 another -- it's on my -- from the review that 13 Mr. Cravens and I had yesterday, that was one that 14 I noted in my book and have since revised. 15 MR. BAUGHMAN: Okay. Are there any 16 other revisions to bring us up to date that might 17 be easier to address than going through on our 18 end? 19 MR. TOTH: Yes. Yes, it would. I 20 will be more than happy to go through those -- 21 MR. BAUGHMAN: Thank you. 22 MR. TOTH: -- and see, page by 23 page. I'm lucky I used my red pen. 24 One of the things that you will 25 notice on page 3, from the illustration itself,</p>	<p style="text-align: right;">Page 33</p> <p>1 when the panel is built, it was designed to have 2 the e-stops above the silence. They were 3 actually -- the silencers were installed above. 4 So that will change. There is, within the manual, 5 as, Mr. Chairman, you mentioned about the pullout 6 versus the twisties or the twist-styled e-stops on 7 page 4, the second line down, that has been 8 revised to twisting to reset. That will be sent. 9 Again, this -- they utilize the phone 10 system versus a radio system here. That would be 11 on page 6. Same would be on Number 9 of page 9 12 under Part A, A-9, is the phone system. 13 On page 14, as I mentioned 14 previously, under Boiler Number 3, that was just a 15 copy/paste error on my part. That should be 16 Honeywell RM7800 versus the Hawkeye E111. So if 17 you'll see that under -- at the bottom of Boiler 3 18 column. 19 Also, on page 23, the piping diagram, 20 I inadvertently included modulating valves on the 21 feed water; whereas, these are off and on. So I 22 have since removed those and also included a feed 23 water line from the DA up to Boiler Number 3. So 24 that's just a visual. 25 MR. BAUGHMAN: There was also a</p>

<p style="text-align: right;">Page 34</p> <p>1 modulating valve, I believe, on the condensate 2 return coming in along with the feed water. Is 3 that still in place?</p> <p>4 MR. TOTH: I believe that is still 5 accurate in that case, yes.</p> <p>6 Under page 26 for Mr. Cravens and his 7 counterparts for the services technician, within 8 Covenant Health, they have the same title but for 9 different hospitals. Unfortunately -- so what 10 we've done is utilize the job descriptions 11 throughout covenant. So when I pulled those in, 12 there was an addition on page 27, at the top, for 13 Number 2 at the very top.</p> <p>14 Keeping a record of the fees, that is 15 not applicable to Cumberland Medical, so I took 16 that out and corrected the spacing for the 17 sentence above. It's just one less thing for 18 Mr. Cravens and his counterparts to have to worry 19 about.</p> <p>20 And as you mentioned, Mr. Baughman, 21 under the Glossary of Terms, page 34, included the 22 bullet point indicating the boiler guard as a 23 boiler attendant.</p> <p>24 And, sir, I believe that is all of 25 the editorial revisions.</p>	<p style="text-align: right;">Page 35</p> <p>1 MR. BAUGHMAN: Just another little 2 clarification for me, Mr. Toth. When you say the 3 remote station, is it the PBX?</p> <p>4 MR. TOTH: Yes, sir.</p> <p>5 MR. BAUGHMAN: Okay. The -- under 6 Remote Attendant on page 35, Appendix I, the last 7 statement says, "The workstation for this position 8 is the main security guard gate/remote station 9 located at Gate 1.</p> <p>10 MR. TOTH: Yeah. That would be 11 just a simple problem. And what page was that, 12 sir?</p> <p>13 MR. BAUGHMAN: It's page 35.</p> <p>14 MR. TOTH: Okay. I will make sure 15 that that's revised.</p> <p>16 MR. BAUGHMAN: You'll revise it to 17 where it says --</p> <p>18 MR. TOTH: Uh-huh.</p> <p>19 MR. BAUGHMAN: -- what in 20 particular?</p> <p>21 MR. TOTH: I will revise it for the 22 location of the remote panel shall contain -- and 23 well, 35. I must have already changed that. Oh, 24 okay. You're talking about the remote attendant 25 on that. Let me take a look at that. Remote</p>
<p style="text-align: right;">Page 36</p> <p>1 attendant will be a trained individual, qualified 2 by Cumberland Medical Center designated to monitor 3 the remote panel while performing their duties as 4 a PBX operator. The workstation of this position 5 is the PBX office and located on the third floor 6 in the hospital.</p> <p>7 Thank you for bringing that to my 8 attention.</p> <p>9 MR. BAUGHMAN: Yes, sir.</p> <p>10 CHAIRMAN MORELOCK: Any other 11 questions or comments?</p> <p>12 MR. FOX: I've got a question about 13 in your opening statement, Marty, about the 14 description of the boilers and all. You said that 15 had a deaerator that operated less than 5 psi but 16 was not registered with the State.</p> <p>17 MR. TOTH: Yes. It does not 18 require it, yes.</p> <p>19 MR. FOX: Well, I'm looking at the 20 description of the boilers here on page 23, and 21 it's listed as an atmospheric deaerator.</p> <p>22 MR. TOTH: The manufacturer defines 23 it as an atmospheric deaerator, so I utilized the 24 same title as the manufacturer.</p> <p>25 MR. FOX: But it has no pressure</p>	<p style="text-align: right;">Page 37</p> <p>1 whatsoever on it, correct?</p> <p>2 MR. TOTH: It's not that it has no 3 pressure whatsoever. It has pressure less than 4 5 psi. I would allude to Mr. Cravens to identify 5 if it has --</p> <p>6 MR. BOWERS: I think there's a 7 correction on that. The chief can correct me. 8 It's not what it operates at. It's the MAWP of 9 the vessel that decides if it's supposed to be 10 registered with the State.</p> <p>11 MR. CHAPMAN: Okay. If it has no 12 safety valve, then it's not building pressure 13 because it's open to the atmosphere.</p> <p>14 MR. BOWERS: Well, he said it's not 15 atmospheric. He's saying that it's less than 16 5 psi. But I think the code actually calls for 17 the MAWP of the vessel, not what the operating of 18 the vessel is.</p> <p>19 MR. TOTH: If I may add, 20 Mr. Chairman. Number one, this is operating on 21 less than 1 psi, as Mr. Cravens says.</p> <p>22 CHAIRMAN MORELOCK: Well --</p> <p>23 MR. TOTH: Let's get a better 24 understanding when we're talking about deaerators. 25 All deaerators are vented to the atmosphere. If</p>

<p style="text-align: right;">Page 38</p> <p>1 they weren't, you wouldn't be getting rid of the 2 air. Okay? You have some that are condensate 3 receivers, per se, or feed tanks that are 4 straight-vented to the atmosphere. There's no 5 restriction whatsoever.</p> <p>6           The main purpose -- just for a little 7 bit of education here, the main purpose for having 8 that deaerator under pressure is to allow for us 9 to increase that temperature of that feed water 10 going into the boiler, making it more efficient.</p> <p>11           This particular unit and this 12 particular manufacturer -- and I will be more than 13 happy to provide the manufacturer's information. 14 I have it on my computer and I can send it to 15 you-all -- is going to identify between a storage 16 tank, an atmospheric deaerator that is injecting 17 steam into the deaerator, and a full deaerator, a 18 pressurized deaerator. That perfect operation of 19 those is going to be between 5 and 7 psi. That's 20 going to get you above that 227 degrees to the 21 232-degree mark. That is not what we have here. 22 So it is not required to be inspected by the 23 State.</p> <p>24           MR. BAUGHMAN: Does it have a 25 relief valve on it?</p>	<p style="text-align: right;">Page 39</p> <p>1           MR. CRAVENS: No, sir. Open stack, 2 six inch.</p> <p>3           MR. BAUGHMAN: One other item that 4 just seems to contradict itself -- and I know it's 5 addressed under the placard -- but it's 6 identifying the boiler guard as a boiler 7 attendant. And under description of boiler 8 attendants, it says the boiler attendant can go to 9 the boiler, check it, identify problems, report 10 back to the remote station, and reset it once the 11 problem is cleared. But we allow the boiler guard 12 to act as a boiler attendant. But it says the 13 boiler guard cannot reset the boiler. So it's 14 identified as that, but there's a conflict. And 15 I'm just wondering if the boiler guard should 16 actually be classified as a boiler attendant or 17 not.</p> <p>18           MR. TOTH: He should. And this is 19 not something uncommon. This has been brought 20 before this body numerous times. And where it is, 21 it is the preference of the owner-user as to what 22 responsibilities they want to give their 23 individuals. Okay? Just because that individual 24 is qualified/certified as a boiler attendant, 25 unless we're speaking of a boiler operator, the</p>
<p style="text-align: right;">Page 40</p> <p>1 owner-user may choose to be notified before we 2 restart that boiler. That's their purview. 3 That's what they choose that they want to do. 4 Okay? He's still qualified. He's still -- he or 5 she still goes through the same training class, 6 still takes the same final exam, still serves the 7 same position; however, it's the choice of the 8 hospital that if a boiler does go into alarm, it's 9 shut down. The responsibility of that boiler 10 guard is to report to the boiler room to ensure 11 there is no adverse conditions present. And then 12 once the on-call technician comes in, they will 13 then start up that boiler and go through the 14 process. That's just a choice that they have.</p> <p>15           MR. BOWERS: They just feel more 16 comfortable with -- to call in and start the 17 boiler rather than the security guard.</p> <p>18           MR. TOTH: Sure. Absolutely.</p> <p>19           MR. BAUGHMAN: And there's a 20 service tech or a technician available for each 21 shift? Or does that responsibility go over to -- 22 is there a time when there's not ever a utility 23 service technician available?</p> <p>24           MR. CRAVENS: On call available, 25 yes.</p>	<p style="text-align: right;">Page 41</p> <p>1           MR. BAUGHMAN: On call being, 2 maybe, at home or on-site?</p> <p>3           MR. CRAVENS: That would be at home 4 after hours.</p> <p>5           MR. BAUGHMAN: Okay. So we've got 6 the availability of the boiler going down, then 7 having to call somebody at home to bring them in 8 and just attend to it in that form or fashion.</p> <p>9           MR. CRAVENS: Yes.</p> <p>10           MR. TOTH: And, again, that's not 11 something that's uncommon.</p> <p>12           MR. BAUGHMAN: It's not something 13 that's great but it's not uncommon.</p> <p>14           MR. TOTH: Well, and I do agree 15 with you, Mr. Baughman, in the sense that if the 16 individuals that are serving the afterhours are 17 not qualified, have not gone through their proper 18 training, I agree with you one hundred percent. I 19 can assure you these individuals that will serve 20 in that position will go through the proper 21 training. They will be qualified. They will be 22 tested.</p> <p>23           MR. BAUGHMAN: As a follow-up to 24 that, just my own experience with these boiler 25 guards that have been put into position of being</p>

<p style="text-align: right;">Page 42</p> <p>1 boiler attendants, they're very uncomfortable in 2 that position. Just my experience.</p> <p>3 MR. TOTH: They are very 4 uncomfortable until they get certified. I've ran 5 through that before where people have sat in a 6 class and they're, like, "I can't believe we're 7 here." And then, "I don't know anything about 8 these items." And they sit through the class, and 9 just the energy that they have after, because it 10 is a sense of, "Hey, I just learned something 11 new." We're moving forward. If they are that 12 uncomfortable, most of them will do something so 13 they won't pass the exam. I've seen that, too. 14 And then they'll be assigned somewhere else.</p> <p>15 MR. BAUGHMAN: Thank you.</p> <p>16 CHAIRMAN MORELOCK: Just to address 17 Mr. Bowers' comment about pressure, I tried to 18 find it. I've got rule 800-3-3 but I don't have 19 Tennessee law. I'm sure Mr. Bailey does. But 20 TCA 68-122-105 lists the exemptions of pressure 21 vessels. And those exemptions are going to 22 include DOT service and all these things. But 23 what's going to speak to your question and concern 24 was -- is that if you have a vessel that is either 25 rated or operated at 15 psi or less, it is</p>	<p style="text-align: right;">Page 43</p> <p>1 unregulated in the state of Tennessee.</p> <p>2 And so where you get into a quandary 3 is when you have people that are trying to do 4 relief device calculations that will come and say, 5 "Well, I would like to use the full MAWP of the 6 vessel," and I say, "Well, fine." And then that 7 becomes a T vessel because you're utilizing the 8 full MAWP of the vessel.</p> <p>9 But if it's rated 15 or less, like an 10 API 650, or if it's relieved at 15 or less, you'll 11 see in that exemption that it will exempt it from 12 registration with the state.</p> <p>13 Now, you still -- if it's a code 14 vessel, you've still got to maintain it.</p> <p>15 MR. TOTH: If I may add to that -- 16 absolutely. And a lot of situations that you're 17 going to run into is when deaerators -- 18 deaerators, primarily, when you see them, are 19 going to be constructed to a 50-psi MAWP. When 20 the manufacturers do that, they will inevitably 21 put a 50-psi relief valve on that DA.</p> <p>22 We have seen in the past where, 23 instead of, they have taken and dropped that 24 relief valve down to 10 or 15 or below, and then 25 you fall into that exemption status.</p>
<p style="text-align: right;">Page 44</p> <p>1 MR. BAUGHMAN: The last item I have 2 Mr. Toth is on page 37, Item Number 20.</p> <p>3 MR. TOTH: Yes. I'm glad you 4 bought that up. These particular units -- and 5 I'll go where you're going, unauthorized access. 6 These particular controls don't have password 7 controls. Usually, what we're running into, when 8 we talk about preventing access, may be a system 9 that's connected to a network. Or if you have a 10 Hawk system or a Siemens system, that you can go 11 in and set the individual parameters, this was one 12 of those areas where you marked it yes and then 13 you realize that -- these don't actually have 14 passwords. These are stand-alone systems. 15 They're not on a network. You're not going in 16 there to change any settings whatsoever.</p> <p>17 MR. BAUGHMAN: Well, it gave a 18 reference, of course, as you notice Appendix B, 19 page 15 through 17. So it looks like there's --</p> <p>20 MR. TOTH: It looks like --</p> <p>21 MR. BAUGHMAN: -- some homework 22 that's been done in the reference.</p> <p>23 MR. TOTH: Right.</p> <p>24 MR. BAUGHMAN: But it's not 25 actually password protected, because there's</p>	<p style="text-align: right;">Page 45</p> <p>1 nothing --</p> <p>2 MR. TOTH: It's not password 3 protected. Right. Right.</p> <p>4 MR. BAUGHMAN: Okay. I just wanted 5 to clarify --</p> <p>6 MR. TOTH: And that's where it's 7 kind of --</p> <p>8 MR. BAILEY: She can only record 9 one at a time.</p> <p>10 MR. TOTH: It's actually what -- 11 exactly what you're saying, is that it references 12 back to the controls; however, these controls are 13 not password protected. So does it follow the 14 requirements for can somebody access it or not? I 15 should have put N/A, because that's what it should 16 have been. And I'll be more than happy to revise 17 that.</p> <p>18 CHAIRMAN MORELOCK: But if you look 19 on page 16, the last bullet on the safety 20 features, what satisfied that for me was it says 21 "Tamper-resistant timing and logic." So how is it 22 tamper proof?</p> <p>23 MR. TOTH: So let me get to where 24 you're referring to. Page 16, "Tamper-resistant 25 timing and logic." It's all built in. You can't</p>

<p style="text-align: right;">Page 46</p> <p>1 get into it and tamper with it. It's all encased.</p> <p>2 CHAIRMAN MORELOCK: Well, that's</p> <p>3 what satisfied me.</p> <p>4 MR. FOX: You can, but you can't.</p> <p>5 MR. TOTH: You can, but you can't.</p> <p>6 MR. FOX: It says it's a</p> <p>7 tamper-resistant control, tamper-resistant timing.</p> <p>8 Most of them take that 30-second timing card out</p> <p>9 and put the 7-second timing card in it. That's</p> <p>10 not tamper resistant. If you follow what I'm</p> <p>11 saying, you can change the purge times of that</p> <p>12 boiler totally, where you will not get a change</p> <p>13 notice of variance through that boiler.</p> <p>14 So for that to say tamper-resistant</p> <p>15 timing, it's not. Honeywell makes its purge cards</p> <p>16 anywhere from seven seconds to two-and-a-half</p> <p>17 minutes.</p> <p>18 CHAIRMAN MORELOCK: Okay.</p> <p>19 MR. TOTH: If I may, just to answer</p> <p>20 that, this bullet point comes directly from the</p> <p>21 manufacturer's documentation as a bullet point</p> <p>22 within their manual. I do agree with what you're</p> <p>23 saying, Mr. Fox. You can go in, remove the</p> <p>24 amplifier, remove the purge cards, so now you're</p> <p>25 purged in that -- whatever section. And that goes</p>	<p style="text-align: right;">Page 47</p> <p>1 through every Honeywell 7800 that's out in the</p> <p>2 market that's gone through this board has the same</p> <p>3 thing.</p> <p>4 CHAIRMAN MORELOCK: So --</p> <p>5 MR. TOTH: I think it's</p> <p>6 satisfactory, because when we're talking about the</p> <p>7 timing, Mr. Fox is alluding to the time of the</p> <p>8 purge. This is alluding to the timing of the</p> <p>9 sequence of operation. Okay? And so this</p> <p>10 statement is actually accurate.</p> <p>11 Now, if you take out and you take a</p> <p>12 30-second purge card and you put in a 15-second</p> <p>13 purge card, does that cause an issue? Yes, it</p> <p>14 could.</p> <p>15 Now, however, when we look at the</p> <p>16 code, what does the code read? What does the code</p> <p>17 require? The code requires air changes, at least</p> <p>18 four air changes. Who's to say that within</p> <p>19 15 seconds we can't have four air changes. Okay?</p> <p>20 Again, if we're talking about this bullet point,</p> <p>21 and the board has an issue with the bullet point,</p> <p>22 I'll be more than happy to remove it; however,</p> <p>23 what they're intending is a sequence of operation,</p> <p>24 not purge time.</p> <p>25 MR. BAUGHMAN: I still believe, in</p>
<p style="text-align: right;">Page 48</p> <p>1 reading it it's not applicable, is the easiest</p> <p>2 thing, because otherwise, it gets into too much</p> <p>3 technical of what it can do.</p> <p>4 On a Hawk system, it says it's</p> <p>5 password protected. These, it's not, but it's not</p> <p>6 really applicable. So my thought process is just</p> <p>7 to make it not applicable and not have a reference</p> <p>8 to an appendix and so forth, and just move on with</p> <p>9 it.</p> <p>10 MR. TOTH: Sure. I'd be more than</p> <p>11 happy to do that.</p> <p>12 MR. BAUGHMAN: That's just my</p> <p>13 suggestion with it.</p> <p>14 MR. TOTH: And I'm glad you brought</p> <p>15 that up. That was something that I saw in the</p> <p>16 review and didn't mention because I didn't go that</p> <p>17 far. But good job.</p> <p>18 MR. BAUGHMAN: Thank you.</p> <p>19 CHAIRMAN MORELOCK: Any other</p> <p>20 questions?</p> <p>21 (No verbal response.)</p> <p>22 CHAIRMAN MORELOCK: Hearing none,</p> <p>23 do I have a motion for approval of this variance</p> <p>24 based on the conditions of revisions to the manual</p> <p>25 based on the comments and discussion at the</p>	<p style="text-align: right;">Page 49</p> <p>1 Tennessee board meeting and a successful site</p> <p>2 visit by the boiler unit?</p> <p>3 MR. BOWERS: I so move.</p> <p>4 CHAIRMAN MORELOCK: Do I have a</p> <p>5 second?</p> <p>6 MR. BAUGHMAN: Second.</p> <p>7 CHAIRMAN MORELOCK: Last call for</p> <p>8 questions or comments.</p> <p>9 (No verbal response.)</p> <p>10 CHAIRMAN MORELOCK: Hearing none,</p> <p>11 I'll call the question. All in favor say aye.</p> <p>12 (Affirmative response.)</p> <p>13 CHAIRMAN MORELOCK: Opposed?</p> <p>14 (No verbal response.)</p> <p>15 CHAIRMAN MORELOCK: Abstentions?</p> <p>16 (No verbal response.)</p> <p>17 CHAIRMAN MORELOCK: Not voting?</p> <p>18 (No verbal response.)</p> <p>19 CHAIRMAN MORELOCK: Gentlemen, you</p> <p>20 have a contingently approved manual.</p> <p>21 MR. TOTH: Thank you very much.</p> <p>22 MR. CRAVENS: Thank you, gentlemen.</p> <p>23 CHAIRMAN MORELOCK: Okay. That</p> <p>24 will take us to Item 19-16 Carlex Glass America</p> <p>25 requesting a new variance on two high-pressure</p>

<p style="text-align: right;">Page 50</p> <p>1 boilers.</p> <p>2 MR. TOTH: If you'll give me a</p> <p>3 second, Mr. Chairman.</p> <p>4 MR. BAILEY: Conflicts?</p> <p>5 CHAIRMAN MORELOCK: Are there any</p> <p>6 conflicts on this item?</p> <p>7 MR. BAUGHMAN: (Indicating.)</p> <p>8 CHAIRMAN MORELOCK: We do have a</p> <p>9 conflict on this item with Mr. Baughman.</p> <p>10 MR. BAUGHMAN: I've worked there</p> <p>11 previously.</p> <p>12 Hello, Mr. Bolton.</p> <p>13 MR. TOTH: If you'll give me one</p> <p>14 second, Mr. Chairman. I want to make sure that we</p> <p>15 didn't have any editorials that I can highlight.</p> <p>16 CHAIRMAN MORELOCK: Okay.</p> <p>17 MR. FOX: I have a conflict also.</p> <p>18 CHAIRMAN MORELOCK: Okay.</p> <p>19 MR. BAUGHMAN: If we worked there,</p> <p>20 does that qualify as a conflict?</p> <p>21 CHAIRMAN MORELOCK: Like recently?</p> <p>22 MR. FOX: No.</p> <p>23 CHAIRMAN MORELOCK: How long has it</p> <p>24 been?</p> <p>25 MR. FOX: Three or four years.</p>	<p style="text-align: right;">Page 51</p> <p>1 CHAIRMAN MORELOCK: Mr. Bailey,</p> <p>2 what would you say? Conflict or not?</p> <p>3 MR. BAILEY: No. If it's been</p> <p>4 three or four years, I don't think so.</p> <p>5 MR. BAUGHMAN: Well, I'll rescind</p> <p>6 my conflict, then.</p> <p>7 CHAIRMAN MORELOCK: So for both of</p> <p>8 you?</p> <p>9 MR. BAUGHMAN: For me it's been</p> <p>10 close to ten.</p> <p>11 MR. TOTH: I would say in this</p> <p>12 industry, if you -- if you're in the service</p> <p>13 industry and haven't after all the experience you</p> <p>14 two have, I would...</p> <p>15 CHAIRMAN MORELOCK: All right. So</p> <p>16 I amend that to we have no conflicts.</p> <p>17 MR. TOTH: Great.</p> <p>18 Okay, Mr. Chairman and members of the</p> <p>19 board. Thank you very much. I'm happy to be here</p> <p>20 with Joey Scott and Mr. Mike Bolton with Carlex</p> <p>21 Glass.</p> <p>22 Mr. Scott is the process, float, and</p> <p>23 facilities engineer. You will find him and, also,</p> <p>24 Mr. Bolton, who is a facility superintendent, on</p> <p>25 your org chart on page 21.</p>
<p style="text-align: right;">Page 52</p> <p>1 Carlex Glass, located here in</p> <p>2 Nashville, is an automotive glass manufacturing</p> <p>3 plant. They've been in business for quite a few</p> <p>4 years and under a few different names, but doing</p> <p>5 the same great job.</p> <p>6 So what we have is we have two</p> <p>7 boilers located, actually, in the plant itself.</p> <p>8 They do not have individual boiler rooms. They</p> <p>9 are in the processing location. You can see the</p> <p>10 illustration in the appendix that shows both of</p> <p>11 those boilers and where they lay. They have the</p> <p>12 proper e-stops in place to -- for local e-stops.</p> <p>13 These particular boilers we have are</p> <p>14 both Cleaver-Brooks boilers operating off natural</p> <p>15 gas. The larger boilers, the 400-horsepower</p> <p>16 Cleaver-Brooks, and then we have a 250-horsepower</p> <p>17 Cleaver-Brooks boiler.</p> <p>18 These boilers, unlike most operations</p> <p>19 that we see which operate together in unison in a</p> <p>20 common header, though these have the ability for</p> <p>21 crossover, each boiler is dedicated to a process</p> <p>22 operation. If you need to have additional</p> <p>23 information on what those are, Mr. Scott or</p> <p>24 Mr. Bolton would be happy to go into depth on</p> <p>25 that.</p>	<p style="text-align: right;">Page 53</p> <p>1 Unlike some of the variances that we've</p> <p>2 seen today that are using boiler guards for</p> <p>3 afterhours work, Carlex Glass actually has a</p> <p>4 boiler operator on-site 24/7. And we are</p> <p>5 utilizing Walden Securities at the security gate,</p> <p>6 Gate Number 1, as our remote attendant.</p> <p>7 And I'll be more than happy to answer</p> <p>8 any additional questions. Again, as you will see</p> <p>9 when you look at the equipment, each boiler has</p> <p>10 its own DA. This was very interesting for, as my</p> <p>11 wife likes to call me, a boiler geek. I love the</p> <p>12 fact that we have some variety here. We have a</p> <p>13 tray-type deaerator and a spray-type deaerator, so</p> <p>14 there's a lot to see. So I'll open -- welcome any</p> <p>15 questions you may have.</p> <p>16 CHAIRMAN MORELOCK: Motion to</p> <p>17 discuss?</p> <p>18 MR. BAUGHMAN: So moved.</p> <p>19 MR. BOWERS: Second.</p> <p>20 CHAIRMAN MORELOCK: Okay. What</p> <p>21 questions or comments do you have?</p> <p>22 MR. BAUGHMAN: One editorial note,</p> <p>23 Appendix A under the boiler data sheet under the</p> <p>24 WS1 boiler, you have 250 horsepower gas only. But</p> <p>25 look at what the max output is in pounds per hour.</p>

<p style="text-align: right;">Page 54</p> <p>1 (No verbal response.)</p> <p>2 MR. BAUGHMAN: It's not --</p> <p>3 250 horse isn't 6900. That's a 200 horse.</p> <p>4 MR. TOTH: I'll be more than happy</p> <p>5 to do the calculation as we sit here.</p> <p>6 MR. BAUGHMAN: Thank you, sir.</p> <p>7 MR. TOTH: I beg to differ, sir.</p> <p>8 No, I'm kidding.</p> <p>9 MR. BAUGHMAN: So we'll correct</p> <p>10 that to 8625.</p> <p>11 MR. TOTH: 8625, yes, sir.</p> <p>12 MR. BAUGHMAN: It just kind of</p> <p>13 shows you how close we go over these things.</p> <p>14 MR. TOTH: Well, you know, when you</p> <p>15 look at that, the -- and I'm going to have to take</p> <p>16 a closer look at the data plate, because you're</p> <p>17 absolutely correct. A lot of times what we'll do</p> <p>18 is we look at the data plate information, and if</p> <p>19 I'm not mistaken, there was some information. So</p> <p>20 I'm going to double-check on that and make sure.</p> <p>21 Because it is listed as a 250, the</p> <p>22 issue is, is also, 1990. So -- and what I mean by</p> <p>23 that is that how you go about marketing the</p> <p>24 boiler. Do you see? I found that some of the</p> <p>25 older boilers, they did not take into account the</p>	<p style="text-align: right;">Page 55</p> <p>1 efficiencies in marketing.</p> <p>2 So when you look at an 80 percent</p> <p>3 efficient boiler -- okay? -- you look at that</p> <p>4 80 percent efficiency. When they go about and</p> <p>5 they market it not as an 80 percent, but they</p> <p>6 market it as 100 percent efficiency, but it</p> <p>7 doesn't really operate at that, I have actually</p> <p>8 seen that and that has everything to do with how</p> <p>9 the plate was put onto the boiler. So I'm going</p> <p>10 to verify it, absolutely. But you're absolutely</p> <p>11 correct, that 8625 is a 250-horsepower boiler at</p> <p>12 80 percent efficiency.</p> <p>13 MR. BAUGHMAN: Yeah. Because we do</p> <p>14 have the input of the ten four sixty-one, so that</p> <p>15 would correlate to the output.</p> <p>16 MR. TOTH: Okay.</p> <p>17 MR. BAUGHMAN: So how they market</p> <p>18 it and what have you is interesting.</p> <p>19 But where are the e-stops located at?</p> <p>20 MR. TOTH: Are you talking about</p> <p>21 the local estops?</p> <p>22 MR. BAUGHMAN: Yes.</p> <p>23 MR. TOTH: The local e-stops within</p> <p>24 the path, within 50 feet of the boiler of egress.</p> <p>25 And really, this location, as you can see from the</p>
<p style="text-align: right;">Page 56</p> <p>1 photo, what you have is you actually have</p> <p>2 production on the left-hand side, which is where</p> <p>3 your autoclaves are located at.</p> <p>4 And what's directly to the right</p> <p>5 of -- as you're looking at Boiler Number 1, what's</p> <p>6 directly to the right of the DA?</p> <p>7 MR. SCOTT: West of the DA, really,</p> <p>8 we don't have any production in that area.</p> <p>9 MR. BOLTON: There's a row of</p> <p>10 columns immediately to the right.</p> <p>11 MR. TOTH: And so they're located</p> <p>12 in that area. The egress coming out, the e-stop</p> <p>13 is within 50 feet through the path of egress.</p> <p>14 MR. BAUGHMAN: And you know why I</p> <p>15 asked the question, because of the egress of do we</p> <p>16 have multiple e-stops or do we have just one at a</p> <p>17 point of egress. So that's kind of where I was</p> <p>18 going with the question on where it was located.</p> <p>19 MR. TOTH: That's a very good</p> <p>20 question. As a matter of fact, you'll see -- in</p> <p>21 December, you'll notice something that I do with</p> <p>22 site plans now, is not only am I showing where the</p> <p>23 remote are, I actually have an icon showing where</p> <p>24 the local e-stops are. Because I know that's very</p> <p>25 important and something else that's on the agenda</p>	<p style="text-align: right;">Page 57</p> <p>1 that we're going to be talking about.</p> <p>2 MR. BAUGHMAN: Very good. Thank</p> <p>3 you.</p> <p>4 CHAIRMAN MORELOCK: Any other</p> <p>5 questions?</p> <p>6 (No verbal response.)</p> <p>7 CHAIRMAN MORELOCK: The only thing</p> <p>8 I have is what we've talked about on some of the</p> <p>9 other manuals. On page 5 under 1. B.(2), for the</p> <p>10 remote attendant, it just says that any position</p> <p>11 assigned by Carlex Glass America, LLC management,</p> <p>12 as far as a remote attendant, does your Appendix G</p> <p>13 support that?</p> <p>14 MR. TOTH: And it would. Again, as</p> <p>15 with the other variances, this is a simple</p> <p>16 placeholder in case Carlex Glass chooses to have</p> <p>17 somebody else serve that role. At that time, we</p> <p>18 would do a revision and document it properly</p> <p>19 within the manual.</p> <p>20 CHAIRMAN MORELOCK: Very good.</p> <p>21 Thank you.</p> <p>22 Any other questions or comments?</p> <p>23 (No verbal response.)</p> <p>24 CHAIRMAN MORELOCK: All right.</p> <p>25 Hearing none, I need a motion to approve this</p>

<p style="text-align: right;">Page 58</p> <p>1 variance contingent on revisions to the manual  2 based on comments from the Tennessee Board at this  3 meeting and a successful site visit from the  4 boiler unit.</p> <p>5 MR. FOX: I'll make that motion.  6 MR. BAUGHMAN: Second.  7 CHAIRMAN MORELOCK: Any other  8 questions or comments?  9 (No verbal response.)  10 CHAIRMAN MORELOCK: Hearing none,  11 I'll call the question. All in favor, say aye.  12 (Affirmative response.)  13 CHAIRMAN MORELOCK: Opposed?  14 (No verbal response.)  15 CHAIRMAN MORELOCK: Abstentions?  16 (No verbal response.)  17 CHAIRMAN MORELOCK: Not voting?  18 (No verbal response.)  19 CHAIRMAN MORELOCK: Gentlemen, you  20 have a contingently approved variance.  21 MR. TOTH: Thank you.  22 CHAIRMAN MORELOCK: Thank you.  23 That takes us to Item 19-18. Quintus  24 Technologies is requesting an alteration to a  25 Tennessee Special located at CoorsTek.</p>	<p style="text-align: right;">Page 59</p> <p>1 If you will step forward, introduce  2 yourself, and present your item.  3 Are there any conflicts on this item?  4 (No verbal response.)  5 MR. REBER: My name is Rick Reber.  6 I'm working for Quintus Technologies as a  7 consultant.  8 This one is a little different than  9 your ordinary boiler cases. It's a high-pressure  10 vessel used to compact ceramic powder for various  11 uses with, basically, room temperature water  12 pressure. So there's no steam involved. It's  13 just all the pressure is produced by an external  14 pump. And the reason for the variance is that the  15 pressure vessel was manufactured before ASME  16 Section 8 Division 3 was in existence, so it  17 couldn't be code-stamped at that time, and it was  18 registered as a Tennessee Special. If it were  19 built today, it would be code-stamped. The same  20 design has been built many times. It's still a  21 current -- what we call a QIC76 model is still  22 being produced today and code-stamped. So if this  23 repair were being done now, it would be done under  24 the National Board inspection code and there  25 wouldn't be any problem. But since it's not</p>
<p style="text-align: right;">Page 60</p> <p>1 code-stamped, we've got to do a National Board  2 alteration to repair it.  3 And the basic repair is to remove  4 what I would consider braided areas in the seal  5 area. The main pressure vessel is basically just  6 a straight cylinder with two covers that are held  7 in place by an external yoke. As it's  8 pressurized, the seals -- it's kind of like a  9 really high-pressured piston. The seals move in  10 and out slightly, but because of the high  11 pressure, 15,000 psi, you get a little bit of wear  12 every time that seal moves. And that's due to  13 maybe a little bit of ceramic powder getting into  14 the water or whatever.  15 But after a while, the seal wears and  16 starts to leak, so it needs to be machined ever so  17 slightly. We're talking, like, you know, an  18 eighth of an inch or whatever, a couple of  19 millimeters, to remove that eroded area and make  20 new seals and continue to operate.  21 Because it's an alteration, it requires  22 some kind of test. So normally, a Section A  23 Division 3 vessel would be tested at one-and-a-  24 quarter times its design pressure. But because of  25 the external yoke, one-and-a-quarter presents an</p>	<p style="text-align: right;">Page 61</p> <p>1 instability problem. So what we've done is --  2 National Board, in this case, allows you to  3 essentially, with an instability problem, allows  4 you to replace the hydro test with some kind of  5 nondestructive testing, which we are doing with  6 magnetic particle. But because we can do some  7 hydro tests, we're also putting in, essentially, a  8 1.15 times test pressure, even though it's not  9 required, to get everybody in agreement that this  10 is what needs to be done.  11 And so what kind of questions do you  12 have?  13 CHAIRMAN MORELOCK: Do I have a  14 motion to discuss?  15 MR. BAUGHMAN: So moved.  16 MR. BOWERS: I may have a conflict  17 on this one because our company insures the  18 location. I don't personally inspect it but I  19 have in the past, maybe ten years ago. Would that  20 be a conflict?  21 MR. BAILEY: Do you currently  22 insure it?  23 MR. BOWERS: Yes, sir.  24 MR. BAILEY: I think that might be  25 a conflict.</p>

<p style="text-align: right;">Page 62</p> <p>1 CHAIRMAN MORELOCK: Okay. We'll 2 declare that conflict, then. 3 Well, Mr. Reber, it's a nice report. 4 Just for the sake of the board, this vessel was 5 built in 1995. 6 MR. BAILEY: I'm sorry. Was there 7 a motion to discuss? 8 CHAIRMAN MORELOCK: Yes. 9 MR. BAILEY: Okay. I missed it. 10 CHAIRMAN MORELOCK: Yes, we had a 11 motion to discuss. This vessel was built in 1995, 12 and ASME Section 8, Division 3 was not printed 13 until 1997. So that's the quandary these 14 gentlemen are wrestling with right now. 15 But this board approved this vessel 16 to be a Tennessee Special in 1995. We have seen 17 this before in 2005. They needed to do the exact 18 same repair, slash, alteration. And so what the 19 situation is, is that under rule 800-3-3.03, 20 Item 6, gives you the definition of what a 21 Tennessee Special is. Point 07 gives you the 22 repairs and alteration requirements, and board 23 interpretation VI. 04-22 lays out the requirements 24 for the repairs and alterations of a Tennessee 25 Special.</p>	<p style="text-align: right;">Page 63</p> <p>1 And so the reason these gentlemen are 2 here before us today is because they are altering 3 this vessel. All repairs to a Tennessee Special 4 has to be approved by the chief inspector of the 5 State of Tennessee. All alterations have to be 6 approved by the Tennessee board. So that's the 7 background for this presentation. 8 I can tell you, just from my own 9 review, all the work that is being proposed here, 10 as well as the design of the vessel, does comply 11 with Article KD-9 of Section 8, Division 3. 12 Materials and construction are within that 13 article. KD-900 requires a minimum of ten 14 windings or ten layers around that cord. This 15 particular vessel has 38, so it satisfies that 16 need. 17 So the difference between this and a 18 Division 1 pressure vessel, I cannot ask 19 Mr. Reber -- well, just tell me what the (t) mean 20 of this vessel is, because it doesn't work that 21 way. It's based on stress. And so what is 22 happening is those windings have compressed that 23 core, and then when he pressurizes it, when 24 CoorsTek pressurizes that, that stress will come 25 out into that. They've designed it for a certain</p>
<p style="text-align: right;">Page 64</p> <p>1 amount of stress. As long as you don't exceed 2 that stress, the vessel is safe. That's what 3 makes this a little different than a normal 4 pressure vessel. 5 So what these gentlemen have prepared 6 for us today is that in 2005, they machined 7 5 millimeters off of this, initially, which was 8 0.02 inches, something like that. 9 MR. REBER: Something like that, 10 0.2. 11 CHAIRMAN MORELOCK: So they're 12 needing to do that again. That's basically where 13 we're at, correct? 14 MR. REBER: That's correct. And 15 this is roughly, just for your information, about 16 a 38-inch inside diameter pressure vessel. 17 CHAIRMAN MORELOCK: Yes. But it's 18 at 16,500 psi. So in order for them to safely 19 operate the vessel, they've got to seal it up. 20 And right now it's posing a leak. So what 21 Mr. Reber's work has shown is that they can 22 machine another 5 millimeters out of that vessel, 23 and it will not be overstressed. That's the 24 simple answer, right? 25 MR. REBER: Pretty much so, yeah.</p>	<p style="text-align: right;">Page 65</p> <p>1 CHAIRMAN MORELOCK: Now, my 2 question, after that explanation, is simply this: 3 So over time, it's taken 15 years to have to do 4 this again. I don't know what your-all's thoughts 5 are, but while you're doing all these 6 calculations, it would be interesting if you could 7 say, "Well, how many times can I machine this core 8 before I run out of useful life?" I'm not saying 9 that has to be done today, but it's just some food 10 for thought. 11 MR. REBER: Yeah. That could be 12 done. 13 CHAIRMAN MORELOCK: So my review of 14 it, as the pressure vessel representative on the 15 board, the things that we have to realize is we 16 are not -- we are approving this based on the fact 17 of does their alteration satisfy what is required 18 by the State of Tennessee. They have put an 19 alteration together, they've taken it to their 20 authorized inspector. The authorized inspector 21 has approved this alteration. And so all we're 22 doing is saying that what they are presenting us 23 satisfies what is required by Tennessee rule and 24 law to accept this as a repair or an alteration. 25 MR. REBER: And just one point of</p>

<p style="text-align: right;">Page 66</p> <p>1 clarification, once this is all done, it will be 2 stamped with a National Board R stamp. 3 CHAIRMAN MORELOCK: Yes. And so in 4 our package, they show that they are an R stamp 5 holder. They actually have a U-3 as well, so they 6 can design Div-3 vessels. So they're got their 7 credentials. The AI has approved, which satisfies 8 the jurisdiction. So really, we're not checking 9 their calculations, per se. We're just wanting to 10 make sure they're satisfying the requirements of 11 the State of Tennessee for this vessel. 12 So that's all the comments I have on 13 it. 14 MR. HARGROVE: Mr. Chairman, is 15 there any testing and evaluation that's done after 16 the machining? 17 CHAIRMAN MORELOCK: Yes. He's 18 going to pressure test it to 1.15 MAWP. If he 19 tries to go what is required in Section 3, the 20 1.25 will overstress the frame. And if you look 21 in Part 3 of the NBIC for an alteration, you are 22 not required to do a hydro to that 1.25. It just 23 says not to exceed 1.5. So the AI and the 24 customer and the expert, subject matter expert, 25 have agreed on 1.15. And that will certainly --</p>	<p style="text-align: right;">Page 67</p> <p>1 that will exceed what would be called a leak 2 tightness test, because you're going above the 3 MAWP. 4 MR. HARGROVE: And who, if I may 5 ask, reviews the results of that testing? 6 CHAIRMAN MORELOCK: The authorized 7 inspector is the one -- Mr. Reber will have to 8 sign off on the R2, as he has performed the 9 calculations. And then the AI will sign off along 10 with the R-stamp holder that they have completed 11 this work, according to NBIC. 12 MR. HARGROVE: Thank you, sir. 13 CHAIRMAN MORELOCK: You're welcome. 14 MR. BAUGHMAN: Did you not mention, 15 also, that you're doing the mag particle in 16 addition to? 17 MR. REBER: Correct. 18 CHAIRMAN MORELOCK: And that's the 19 part of the alteration where he's using NDE in 20 lieu of a complete ASME hydro. So he's actually 21 testing it more than he really needs to, but it's 22 a good, safe test. 23 So any other comments on this, 24 concerns, questions? 25 (No verbal response.)</p>
<p style="text-align: right;">Page 68</p> <p>1 CHAIRMAN MORELOCK: Hearing none, 2 then, do I have a motion to approve the alteration 3 plan for this Tennessee Special vessel? 4 MR. BAUGHMAN: So moved. 5 CHAIRMAN MORELOCK: Do I have a 6 second? 7 MR. HARGROVE: Second. 8 CHAIRMAN MORELOCK: Any other 9 questions or comments? 10 (No verbal response.) 11 CHAIRMAN MORELOCK: I'm going to 12 call the question. All in favor say aye. 13 (Affirmative response.) 14 CHAIRMAN MORELOCK: Opposed? 15 (No verbal response.) 16 CHAIRMAN MORELOCK: Abstentions? 17 (No verbal response.) 18 CHAIRMAN MORELOCK: Not voting? 19 (No verbal response.) 20 CHAIRMAN MORELOCK: Gentlemen, you 21 have an approved alteration. 22 MR. BAUGHMAN: Thank you for your 23 input and expertise on that. 24 CHAIRMAN MORELOCK: Thank you. 25 All right. I've got 10:21, so let's</p>	<p style="text-align: right;">Page 69</p> <p>1 take a nine-minute break and reconvene at 10:30. 2 (Recess observed.) 3 CHAIRMAN MORELOCK: All right. 4 Let's move on to our next agenda item, which is 5 Item 19-19, Unilever. And they are requesting a 6 new variance for two high-pressure boilers. 7 Are there any conflicts on this item? 8 (No verbal response.) 9 CHAIRMAN MORELOCK: Gentlemen? 10 MR. NEVILLE: Good morning. I'm 11 James Neville with Neville Engineering 12 representing Unilever. 13 MR. NICHELSON: Pete Nicholson, 14 boiler operator. 15 MR. NEVILLE: Unilever Covington's 16 facility produces ice cream, so they have several 17 brands that are produced there. It's quite a 18 large facility. So Breyers, Fruttare, Good Humor, 19 Klondike, Popsicle, all of the good stuff comes 20 from the Covington plant. 21 We're requesting a variance on two 22 high-pressure boilers. These operate on demand 23 24 hours a day, seven days a week, furnishing 24 high-pressure steam for heating and process. 25 In the site plan on page 1, we show</p>

<p style="text-align: right;">Page 70</p> <p>1 the proposed location for the remote station, 2 which is approximately 50 feet from the boiler 3 room.</p> <p>4           Boilers 2 and 3 are the ones that will 5 be on this variance. They are both 600-horsepower 6 Burnham boilers as identified in Appendix A. 7 Those do have a Bryan DA with the information that 8 we've identified here. That is a pressurized DA.</p> <p>9           The individuals -- the remote station is 10 a hardwired circuit for each boiler to the remote 11 station. And the boiler attendant and the boiler 12 operator are the utilities maintenance technician, 13 is the job title there. So there are multiple 14 utility maintenance technicians, and they will be 15 manning the boilers from the remote station.</p> <p>16           We list their job description in 17 Appendix G. And I can have Mr. Nicholson talk 18 about the training of those boiler operators, how 19 they're qualified to operate these boilers.</p> <p>20           MR. NICHELSON: Unilever's policy 21 for hiring is to hire somebody who is qualified 22 with a two-year trade school to work in 23 maintenance, and in the utilities department, is 24 required to have some type of background in HVAC 25 and boilers. So most everybody we bring in has</p>	<p style="text-align: right;">Page 71</p> <p>1 some type of boiler operations.</p> <p>2           Then we work with them anywhere from 3 30 to 90 days to make sure they understand, you 4 know, how to take down a boiler, how to bring it 5 back up, how the DA works, you know, changing them 6 pumps, you know, make sure they have a full 7 understanding and then observe them, you know, 8 during the rest of their time to make -- you know, 9 because we do get a lot of low waters for the 10 conductivity that we receive back sometimes. But 11 to see how they handle it and make sure they're -- 12 you know, they're going to be qualified to run it.</p> <p>13           MR. NEVILLE: The control system on 14 these boilers is the Hawk 4000 control system. 15 And we've identified that in Appendix B.</p> <p>16           And if there are any questions, we 17 would like to field any questions.</p> <p>18           CHAIRMAN MORELOCK: Do I have a 19 motion to discuss?</p> <p>20           MR. BAUGHMAN: So moved.</p> <p>21           MR. BOWERS: Second.</p> <p>22           CHAIRMAN MORELOCK: Thank you. 23 What questions/comments do you have on this 24 variance request?</p> <p>25           MR. BAUGHMAN: So how many</p>
<p style="text-align: right;">Page 72</p> <p>1 technicians do you have?</p> <p>2           MR. NICHELSON: We run six total. 3 We run 12-hour shifts on a 2/2/3 schedule. We run 4 two on day shifts and one on night shift.</p> <p>5           MR. BAUGHMAN: Weekends also?</p> <p>6           MR. NICHELSON: Yes, sir. 24/7.</p> <p>7           MR. BAUGHMAN: On E-2 under the 8 Power Piping and Feed Water Diagram, I'm looking 9 in the what looks like the boiler room. The two 10 boilers are identified there.</p> <p>11           MR. NEVILLE: Yes. On E-2?</p> <p>12           MR. BAUGHMAN: Yes, sir.</p> <p>13           MR. NEVILLE: Okay.</p> <p>14           MR. BAUGHMAN: And I show where the 15 emergency stop is located at that point of egress. 16 But I'm noticing other points of egress also.</p> <p>17           MR. NEVILLE: Those go out into the 18 plant.</p> <p>19           MR. NICHELSON: Yeah, they go to 20 the plant. This is actually a sealed door.</p> <p>21           MR. BAUGHMAN: So do we have more 22 than one point of egress out of that boiler room?</p> <p>23           MR. NEVILLE: Yes.</p> <p>24           MR. BAUGHMAN: Okay. And that's 25 what I was wondering. So we're going to be</p>	<p style="text-align: right;">Page 73</p> <p>1 talking about that here in a little while. But I 2 just wanted to make sure that we saw that and then 3 get any comments on what we might need to do to 4 update on other points of location.</p> <p>5           MR. NEVILLE: Okay.</p> <p>6           MR. BAUGHMAN: I notice that we've 7 got an HMI, a human machine interface. Can any 8 parameters be changed utilizing that HMI?</p> <p>9           MR. NEVILLE: I mean, they're 10 password protected for that HMI. Can any 11 parameter be changed? I'm not aware that they can 12 be changed on the interface that the operator has 13 on screen.</p> <p>14           MR. NICHELSON: That's true.</p> <p>15           MR. BAUGHMAN: Okay. Do the 16 parameters ever get changed by anybody?</p> <p>17           MR. NICHELSON: Only when they come 18 out to tune it. We have a third party come to 19 tune the boiler. They log in and change it to get 20 the best efficiency out of it. And that's how we 21 leave them until -- that's usually -- that's an 22 annual tune.</p> <p>23           MR. BAUGHMAN: Okay. So they have 24 the password in addition to site personnel.</p> <p>25           MR. NEVILLE: Yes.</p>

<p style="text-align: right;">Page 74</p> <p>1 MR. BAUGHMAN: Okay.</p> <p>2 CHAIRMAN MORELOCK: Any other</p> <p>3 questions or comments?</p> <p>4 (No verbal response.)</p> <p>5 CHAIRMAN MORELOCK: Hearing none,</p> <p>6 do I have a motion to approve this variance</p> <p>7 contingent on any revisions to the manual based on</p> <p>8 comments from the Tennessee board and a successful</p> <p>9 site visit from the boiler unit?</p> <p>10 MR. BOWERS: I make that motion.</p> <p>11 CHAIRMAN MORELOCK: Okay. Do I</p> <p>12 have a second?</p> <p>13 MR. FOX: I second it.</p> <p>14 CHAIRMAN MORELOCK: Okay. Last</p> <p>15 call for any questions.</p> <p>16 (No verbal response.)</p> <p>17 CHAIRMAN MORELOCK: All right.</p> <p>18 I'll call the question. All in favor, say aye.</p> <p>19 (Affirmative response.)</p> <p>20 CHAIRMAN MORELOCK: Opposed?</p> <p>21 (No verbal response.)</p> <p>22 CHAIRMAN MORELOCK: Abstentions?</p> <p>23 (No verbal response.)</p> <p>24 CHAIRMAN MORELOCK: Not voting?</p> <p>25 (No verbal response.).</p>	<p style="text-align: right;">Page 75</p> <p>1 CHAIRMAN MORELOCK: Gentlemen, you</p> <p>2 have a contingently approved variance.</p> <p>3 MR. NEVILLE: Thank you.</p> <p>4 CHAIRMAN MORELOCK: Thank you.</p> <p>5 So that takes us to agenda Item</p> <p>6 19-20, which is Grace, requesting a new variance</p> <p>7 for one high-pressure boiler.</p> <p>8 MR. NEVILLE: James Neville of</p> <p>9 Nashville Engineering representing Grace.</p> <p>10 MR. ALLEN: Mark Allen, plant</p> <p>11 engineer.</p> <p>12 MR. OLIVERIUS: James Oliverius,</p> <p>13 production superintendent.</p> <p>14 MR. NEVILLE: Grace is a specialty</p> <p>15 chemical manufacturer in Chattanooga, Tennessee.</p> <p>16 We're requesting a variance on one high-pressure</p> <p>17 boiler. This facility has had a variance in the</p> <p>18 past, but this is a brand-new boiler, and we are</p> <p>19 presenting it as a new variance.</p> <p>20 The site plan shows the boiler house</p> <p>21 and the main guard house where we will be</p> <p>22 monitoring that boiler from.</p> <p>23 As far as the personnel at the remote</p> <p>24 station, it will be a security guard. The</p> <p>25 individual monitoring the boilers will be a</p>
<p style="text-align: right;">Page 76</p> <p>1 leadman operator. Their job descriptions are in</p> <p>2 Appendix G. And we list the boiler in Appendix A,</p> <p>3 which is an LX100 Miura boiler.</p> <p>4 And we can take any questions</p> <p>5 regarding this variance.</p> <p>6 CHAIRMAN MORELOCK: Okay. Do I</p> <p>7 have a motion to discuss?</p> <p>8 MR. BOWERS: Motion to discuss.</p> <p>9 MR. BAUGHMAN: Second.</p> <p>10 CHAIRMAN MORELOCK: Thank you.</p> <p>11 What questions/comments do you have</p> <p>12 about this variance request?</p> <p>13 MR. HARGROVE: The leadman operator</p> <p>14 seems to have a lot of responsibilities. Are</p> <p>15 there other individuals to monitor the boiler with</p> <p>16 regard to boiler attendants?</p> <p>17 MR. ALLEN: Well, in an emergency</p> <p>18 the foreman, the production foreman could be</p> <p>19 available for that purpose. He is there at all</p> <p>20 times.</p> <p>21 MR. HARGROVE: And the leadman,</p> <p>22 this is a three-shift operation?</p> <p>23 MR. ALLEN: It's actually two</p> <p>24 shifts.</p> <p>25 MR. OLIVERIUS: It's two shifts</p>	<p style="text-align: right;">Page 77</p> <p>1 through the day but four total shifts.</p> <p>2 MR. HARGROVE: And the leadman is</p> <p>3 two individuals, I would assume.</p> <p>4 MR. OLIVERIUS: No. The leadman is</p> <p>5 one individual, so I have one per shift. I have</p> <p>6 four crews that run on two shifts, two 12-hour</p> <p>7 shifts. So one leadman per shift, and then we</p> <p>8 will have a secondary back-up leadman, if that</p> <p>9 leadman is ever out, to be able to fill that</p> <p>10 position who has also be trained.</p> <p>11 MR. HARGROVE: Thank you.</p> <p>12 MR. BOWERS: Now, this is a new</p> <p>13 boiler, correct?</p> <p>14 MR. ALLEN: Yes.</p> <p>15 MR. NEVILLE: Yes.</p> <p>16 MR. BOWERS: Are there other</p> <p>17 boilers in that same boiler room?</p> <p>18 MR. ALLEN: There's just this one</p> <p>19 boiler.</p> <p>20 MR. BOWERS: Okay. Now, you did</p> <p>21 have a variance before, so you're replacing an old</p> <p>22 boiler?</p> <p>23 MR. ALLEN: Yes.</p> <p>24 MR. BOWERS: Was that a Miura</p> <p>25 boiler also?</p>

<p style="text-align: right;">Page 78</p> <p>1 MR. ALLEN: It's a Miura LX100, 2 yes, sir. 3 MR. BOWERS: The one before that 4 was a Miura? 5 MR. ALLEN: Yes, the same. 6 CHAIRMAN MORELOCK: I've got a 7 couple of comments. If you look at the boiler log 8 in Appendix F, is this indicative of what you're 9 actually testing or looking for, or is this just a 10 generic list? 11 MR. ALLEN: It's indicative of what 12 we would look for. 13 MR. BAILEY: You need to speak up. 14 MR. ALLEN: Yes. This would be -- 15 CHAIRMAN MORELOCK: Is that what 16 you're looking at? 17 MR. ALLEN: Yes. Yes, sir. 18 CHAIRMAN MORELOCK: Okay. So is 19 there any need to -- there's no other parameters 20 you would need to look at on this particular 21 boiler? 22 MR. OLIVERIUS: So we would do -- 23 perform low-water cut-off tests on days of its 24 operation. The night crew is responsible for, you 25 know, chemical water tests. That's not included,</p>	<p style="text-align: right;">Page 79</p> <p>1 so there's a separate sheet that we'll document 2 that on. 3 CHAIRMAN MORELOCK: Okay. Very 4 good. Your manual needs to reflect what you're 5 actually doing. So when a site visit comes and 6 they look at that sheet, they want to see if 7 that's what you're doing. So make sure what 8 you're doing matches your sheet. 9 MR. NEVILLE: We'll add those 10 additional sheets. 11 CHAIRMAN MORELOCK: Very good. 12 Very, very good. 13 And then as far as your remote 14 monitoring system in Appendix B, I could not find 15 any statements as to how you would prevent an 16 unauthorized access. I might have overlooked it 17 but I didn't see it. 18 MR. NEVILLE: I believe those 19 parameters are locked. 20 MR. ALLEN: They are locked. Our 21 service provider, CCS, Combustion Control 22 Services, has the password. I don't know that any 23 of our personnel actually have it, but we get our 24 service from CCS. 25 CHAIRMAN MORELOCK: Okay. You may</p>
<p style="text-align: right;">Page 80</p> <p>1 just want to add a little note in there somewhere 2 that it's password protected or something. Just 3 make it reflect what you're actually doing. 4 And that's the only two comments I 5 had. Thank you. 6 MR. BOWERS: I want to go back to 7 the boiler log. It seems like the boiler log is a 8 little wanting. You know, most boiler logs I see 9 the first thing you're going to check is the 10 water, you know, make sure there's water in the 11 sight glass. But, you know, maybe a little more 12 information in that log. 13 You're only checking that boiler 14 every four hours. So I would maybe have a little 15 more information in that boiler log, what you're 16 checking. 17 MR. BAUGHMAN: When he mentioned 18 sight glass, does the Miura even have a sight 19 glass on it? 20 MR. ALLEN: This one does not. 21 MR. BAUGHMAN: That's what I was 22 thinking. Even though it's a high-pressure steam 23 boiler, it does not have a -- 24 MR. BOWERS: I couldn't remember. 25 So how do you check for water with a Miura?</p>	<p style="text-align: right;">Page 81</p> <p>1 MR. ALLEN: They have probes on 2 them. 3 MR. BOWERS: So there's no visual 4 check? 5 MR. ALLEN: No. 6 MR. BAUGHMAN: So can I reiterate 7 Mr. Morelock's comments on making sure the 8 checklist reflects what's back in your appendices. 9 And back to that boiler log, it shows Appendix F, 10 pages 7 through 9. And I don't have a 7 through 11 9. I've just got an Appendix F. So just make 12 sure that -- I've got an F-1, but I don't have 13 pages 7 through 9 as what's referenced in your 14 checklist. 15 MR. NEVILLE: Well, that would be, 16 as far as the boiler attendant procedures, is what 17 I believe it's referenced in. 18 MR. BAUGHMAN: Oh, okay. So not so 19 much -- 20 MR. NEVILLE: Not F -- 21 MR. BAUGHMAN: Okay. I got you. 22 Okay. That makes -- 23 MR. NEVILLE: Normal duties, you 24 know, report to the boiler room and perform daily 25 tasks and maintenance requirements. We can add</p>

<p style="text-align: right;">Page 82</p> <p>1 some information to that boiler log. I think it 2 needs to have a little more detail than what we've 3 got.</p> <p>4 MR. BAUGHMAN: How do you 5 communicate with this boiler? I know we've got 6 communications availabilities. But how are we 7 communicating with the boiler at the job site?</p> <p>8 MR. ALLEN: Is this between the 9 remote attendant and -- remote operator and the 10 attendant?</p> <p>11 MR. BAUGHMAN: In any form or 12 fashion. Just kind of explain to me how we can 13 communicate with this boiler from not only the 14 remote station but anybody.</p> <p>15 MR. ALLEN: Okay. Well, a couple 16 things. We have a distributing control system in 17 the plant which monitors not necessarily the 18 boiler but pressure at the end users. And our 19 operators carry radios that are used between 20 operations and the leadman. And, of course, they 21 have inner-plant phones and a public address 22 system.</p> <p>23 MR. BAUGHMAN: Is this boiler being 24 monitored off-site at all by anybody else?</p> <p>25 MR. ALLEN: No, not at this time.</p>	<p style="text-align: right;">Page 83</p> <p>1 There is an option for off-site maintenance. But 2 since, I think, they require analog phones for 3 that, and we're digital, and Miura is working 4 through that, but...</p> <p>5 MR. BAUGHMAN: Well, I knew Miura 6 had that capability, so that's why I was asking.</p> <p>7 MR. ALLEN: We've tried to migrate 8 away from analogue phones, and their system still 9 has it.</p> <p>10 MR. BAUGHMAN: And the reason I was 11 asking was in this description of the controls, it 12 talks about the microcomputer responds to the 13 Amnet communication system either over telephone 14 lines or mod bus back net to monitor the boiler. 15 So I didn't know exactly what we were utilizing.</p> <p>16 MR. ALLEN: We're not using that.</p> <p>17 MR. BAUGHMAN: Not using it.</p> <p>18 MR. ALLEN: They've told us that 19 they hopefully will get an upgrade to where they 20 will have digital phone capability through this, 21 and we would like to use it for, you know, 22 maintenance reasons.</p> <p>23 MR. BAUGHMAN: Right now, 24 everything you're doing as far as monitoring the 25 boiler is just read only.</p>
<p style="text-align: right;">Page 84</p> <p>1 MR. ALLEN: Yes.</p> <p>2 MR. BAUGHMAN: Very good. Thank 3 you.</p> <p>4 How many leadman operators do you 5 have?</p> <p>6 MR. OLIVERIUS: So we'll have one 7 per shift. But we -- like I said, we try to have 8 at least one other back-up on the exact same 9 shift. So we try to have at least two. So we're 10 actually training one right now to be a back-up 11 lead operator. So minimum, we try to have two, 12 but there -- some employees, once they learn that 13 circuit and are qualified as a lead operator, they 14 can also step in on those situations.</p> <p>15 MR. BAUGHMAN: Okay. That's all 16 I've got.</p> <p>17 CHAIRMAN MORELOCK: Are there any 18 other questions or comments?</p> <p>19 (No verbal response.)</p> <p>20 CHAIRMAN MORELOCK: Do I have a 21 motion to approve this variance contingent on 22 manual revisions based on Tennessee Board comments 23 and a successful site visit from the boiler unit?</p> <p>24 MR. BAUGHMAN: So moved.</p> <p>25 MR. BOWERS: Second.</p>	<p style="text-align: right;">Page 85</p> <p>1 CHAIRMAN MORELOCK: Any other 2 questions or comments?</p> <p>3 (No verbal response.)</p> <p>4 CHAIRMAN MORELOCK: Hearing none, 5 I'll call the question. All in favor say aye.</p> <p>6 (Affirmative response.)</p> <p>7 CHAIRMAN MORELOCK: Opposed?</p> <p>8 (No verbal response.)</p> <p>9 CHAIRMAN MORELOCK: Abstentions?</p> <p>10 (No verbal response.)</p> <p>11 CHAIRMAN MORELOCK: Not voting?</p> <p>12 (No verbal response.)</p> <p>13 CHAIRMAN MORELOCK: Gentlemen, you 14 have a contingently approved variance.</p> <p>15 MR. NEVILLE: Thank you.</p> <p>16 CHAIRMAN MORELOCK: We have moved 17 proposed changes to Rule 0800-03-03-.14 for fees 18 to the December 11th meeting.</p> <p>19 That completes our new business.</p> <p>20 That takes us to Item 9, which is Rule Cases and 21 Interpretations. And we have a request by ECS 22 Consulting, BI 19-01, to provide an interpretation 23 on the requirements for manually operated remote 24 shut-down switches assigned to high-pressure 25 boilers installed and operated in the state of</p>

<p style="text-align: right;">Page 86</p> <p>1 Tennessee.</p> <p>2           The floor is yours.</p> <p>3           MR. TOTH: Thank you, Mr. Chairman</p> <p>4 and members of the board. Marty Toth, ECS</p> <p>5 Consulting.</p> <p>6           As I'll read, I think everybody on</p> <p>7 the board has a copy of my request. Simply</p> <p>8 enough, what we are seeing in the industry,</p> <p>9 there's a lot of confusion amongst clients as to</p> <p>10 the requirements set forth by this board in</p> <p>11 regards to remote shut-down switches. And I use</p> <p>12 that terminology and don't want do confuse anyone</p> <p>13 here. We're not referring to remote panels for</p> <p>14 variances. The term "manually operated remote</p> <p>15 shut-down switches" is used in the codes to</p> <p>16 identify e-stops. So from hence forth, we'll</p> <p>17 refer to local e-stops versus remote e-stops, if</p> <p>18 that so pleases...</p> <p>19           Simply enough, we're all aware that</p> <p>20 in the state of Tennessee, we have references that</p> <p>21 we refer to. This also makes it simple,</p> <p>22 especially if those code references change from</p> <p>23 time to time. Some time ago, it was put before</p> <p>24 the board that the board will accept all code</p> <p>25 revisions, so that as those code references</p>	<p style="text-align: right;">Page 87</p> <p>1 change, it automatically is updated by this board.</p> <p>2           So in regards to boilers, there's two</p> <p>3 codes that hold precedence within the state of</p> <p>4 Tennessee when it comes to boiler installations.</p> <p>5 It's ASME, CSD-1 and NFPA 85.</p> <p>6           As you-all know, ASME is American</p> <p>7 Society of Mechanical Engineers and National Fire</p> <p>8 Protection Association is the other code body.</p> <p>9 For CSD-1, those are going to be those boilers</p> <p>10 that are between 400,000 BTUs and 12.5 million.</p> <p>11 NFPA 85 is going to be any boiler that's greater</p> <p>12 than 12.5 million.</p> <p>13           So roughly, what we're talking about</p> <p>14 is anything above a 300-horsepower output, would</p> <p>15 be a boiler that is covered under NFPA 85, and</p> <p>16 anything below that would be under CSD-1.</p> <p>17           Both of those codes require the</p> <p>18 installation of remote shut-down switches, as I</p> <p>19 said, local shut-down switches at the boiler or in</p> <p>20 the path of egress. Specifically, if we were to</p> <p>21 look at those codes, you look at CSD-1, CSD-1 is</p> <p>22 going to spell that out in CE-110(b); whereas, an</p> <p>23 and NFPA 85, you're looking under Chapter</p> <p>24 4.11.7.9.</p> <p>25           And, also, we also adopt here in the</p>
<p style="text-align: right;">Page 88</p> <p>1 state of Tennessee National Board Inspection Code,</p> <p>2 which Mr. Chairman is a member of. And within</p> <p>3 that section, Section 2.5.3.2, it also spells out</p> <p>4 and addresses those emergency switches.</p> <p>5           What I would like for this body to do</p> <p>6 is if we could go through these interpretations</p> <p>7 questions. As the process for these, I submit a</p> <p>8 question; I submit the answer as I feel that I'm</p> <p>9 interpreting it as; and then the board either</p> <p>10 agrees, disagrees, or answers in a different way.</p> <p>11           I don't think we do a whole lot of</p> <p>12 these anymore here with the board, but I think</p> <p>13 that they are very beneficial and we're to take</p> <p>14 and put in writing so that the industry throughout</p> <p>15 the state gets a better understanding.</p> <p>16           So if you may, sir, I would ask how</p> <p>17 would you like me to present these? One at a time</p> <p>18 or all together?</p> <p>19           CHAIRMAN MORELOCK: Do you want to</p> <p>20 get this approved as one item, or do you want to</p> <p>21 break up each inquiry as a separate item?</p> <p>22           MR. TOTH: No, sir. Usually, in</p> <p>23 the case of the interpretation, the interpretation</p> <p>24 will be as one item. However, the presentation,</p> <p>25 sometimes you could have some overlap. So</p>	<p style="text-align: right;">Page 89</p> <p>1 usually, address each question independently,</p> <p>2 individually, and then move through the course. I</p> <p>3 believe that in regards to e-stops, I have eight</p> <p>4 questions and replies. So I would be more than</p> <p>5 happy to go through them one at a time. We can</p> <p>6 discuss and then move through it.</p> <p>7           CHAIRMAN MORELOCK: That's fine.</p> <p>8           MR. TOTH: Okay. If the board</p> <p>9 members would, please, under Inquiry Number 1 --</p> <p>10           MR. BAUGHMAN: I'm sorry to</p> <p>11 interrupt. We're talking about CSD-1 and NFPA 85</p> <p>12 and NBIC. And correct me if I'm wrong, Mr. Toth,</p> <p>13 but did NBIC just recently change any requirement</p> <p>14 on e-stops?</p> <p>15           MR. TOTH: They did. And again,</p> <p>16 let's remember where we talk about that. The NBIC</p> <p>17 does mention it. But it also gives it to the</p> <p>18 acceptance of the jurisdiction. Very recently,</p> <p>19 the NBIC added a portion through the latest</p> <p>20 revision that does, in essence, grandfather</p> <p>21 existing locations that do not have e-stops</p> <p>22 already installed. However, each jurisdiction</p> <p>23 stands on its own, has the ability to choose</p> <p>24 certain aspects, and that's why you'll see a lot</p> <p>25 throughout the NBIC. All four sections, you'll</p>

<p style="text-align: right;">Page 90</p> <p>1 see acceptance by the jurisdiction.</p> <p>2 MR. BAUGHMAN: And I mention that</p> <p>3 for the public record because as we're in the</p> <p>4 service industry, we get this from different</p> <p>5 experts that would say well, NBIC says this, and</p> <p>6 we'll say well, that's true, and it goes back to</p> <p>7 our jurisdiction and we're a CSD-1 adopted state.</p> <p>8 And so I just wanted to make sure we had it for</p> <p>9 the record that it goes back to our local</p> <p>10 jurisdiction, our state jurisdiction.</p> <p>11 MR. TOTH: And if I could give a</p> <p>12 good example --</p> <p>13 MR. BOWERS: Well, I was going to</p> <p>14 say the conflict exists, too. We're talking about</p> <p>15 multiple codes where ASME and CSD-1 says you will</p> <p>16 do this, but then the NBIC, in Section F you're</p> <p>17 talking about, remote -- you don't have to do</p> <p>18 that. So one says this; this says no; and we</p> <p>19 adopt both of them.</p> <p>20 MR. TOTH: Right.</p> <p>21 MR. BOWERS: So there's conflicts</p> <p>22 between which one we go by.</p> <p>23 MR. TOTH: And that's why this</p> <p>24 esteemed group of individuals here, you-all have</p> <p>25 that opportunity to clarify that in ways of either</p>	<p style="text-align: right;">Page 91</p> <p>1 board cases or board interpretations; in this</p> <p>2 case, a board interpretation.</p> <p>3 If I could, I would like to give a</p> <p>4 good example of something that Mr. Baughman had</p> <p>5 mentioned. Whereas, if you look, nonreturn</p> <p>6 valves, steam boilers -- steam boilers that are on</p> <p>7 a common header that have manways and are required</p> <p>8 to have double-valve protection. The closest</p> <p>9 valve to the boiler is required to be a non-return</p> <p>10 by the State of Tennessee.</p> <p>11 The NBIC gives an opportunity and</p> <p>12 says that you will have double-valve protection,</p> <p>13 one of which may be a non-return. State of</p> <p>14 Tennessee has taken it one step further in 2016</p> <p>15 and puts it into the rules and regulations and</p> <p>16 stipulates that no, you can't just have two</p> <p>17 valves; you must have a non-return valve.</p> <p>18 So that's a great example of how the</p> <p>19 state has taken it one step further. What the</p> <p>20 state is not going to do, it's not going to take</p> <p>21 it to a lesser standard of safety. That's really</p> <p>22 it. It's usually -- in most cases, I've never</p> <p>23 seen it the opposite. I've always seen it gone a</p> <p>24 little bit more stringent. Okay?</p> <p>25 CHAIRMAN MORELOCK: Yeah. I would</p>
<p style="text-align: right;">Page 92</p> <p>1 add that the jurisdiction is what makes codes</p> <p>2 enforceable.</p> <p>3 MR. TOTH: That's right.</p> <p>4 CHAIRMAN MORELOCK: Without the</p> <p>5 jurisdictional approval and writing it into state</p> <p>6 law, they're just really good guidelines and</p> <p>7 standards, but they really are not enforceable</p> <p>8 without the jurisdiction.</p> <p>9 MR. TOTH: Right. Okay.</p> <p>10 So if we would, without further</p> <p>11 adieu, let's go ahead and go through Inquiry</p> <p>12 Number 1. I'll read it as-is with my reply: "Is</p> <p>13 it required that all locations operating a power</p> <p>14 high-pressure boiler in Tennessee be fitted with a</p> <p>15 manually operated remote shutoff switch?"</p> <p>16 And my reply is yes.</p> <p>17 Inquiry Number 2: "If Inquiry 1 is</p> <p>18 yes, is it required that a manually operated</p> <p>19 remote shutoff switch be located at each means of</p> <p>20 pedestrian egress from the boiler location,</p> <p>21 example, boiler room?"</p> <p>22 Reply: "Yes."</p> <p>23 Inquiry Number 3: "Where a boiler is</p> <p>24 located indoors in a facility and not in an</p> <p>25 equipment room, example, boiler room, mechanical</p>	<p style="text-align: right;">Page 93</p> <p>1 room, et cetera, is it still required to have a</p> <p>2 manually operated remote shutoff switch</p> <p>3 installed?"</p> <p>4 Reply: "Yes. A manually operated</p> <p>5 remote shutoff switch, e-stop, shall be located</p> <p>6 within 50 feet, 15 meters, of the boiler/boilers</p> <p>7 along the primary egress route from the boiler."</p> <p>8 Inquiry Number 4: "For a boiler</p> <p>9 equipped with a power burner, is it required for</p> <p>10 the manually operated remote switch to disconnect</p> <p>11 all fuel and electrical power to the boiler?"</p> <p>12 Reply: "No. The switch need only</p> <p>13 shut off the fuel input to the boiler, that is the</p> <p>14 burner."</p> <p>15 Inquiry 5: "Is it required for all</p> <p>16 high-pressure boilers installed in a location,</p> <p>17 example boiler room, mechanical room, facility</p> <p>18 location, et cetera, to be electrically connected</p> <p>19 to a single manually operated remote shutdown</p> <p>20 switch, that is e-stop, installed at the</p> <p>21 point/points of egress where the activation of the</p> <p>22 switch shall actuate the master fuel trip relays</p> <p>23 on all boilers within the location?"</p> <p>24 Reply: "No. However, this does not</p> <p>25 restrict the owner/user from doing so if they</p>

<p style="text-align: right;">Page 94</p> <p>1 choose."</p> <p>2 Inquiry 6: "For a manually operated</p> <p>3 remote shutdown switch where the boiler room door</p> <p>4 is on the building exterior, is it allowable for</p> <p>5 the switch to be located just inside the door to</p> <p>6 the boiler room?"</p> <p>7 Reply: "Yes."</p> <p>8 Inquiry Number -- oh, my numbering is</p> <p>9 off there, isn't it? Sorry about that. This is</p> <p>10 actually Inquiry Number 7: "For a manually</p> <p>11 operated remote shutdown switch where the boiler</p> <p>12 room door is on the building interior, leading to</p> <p>13 a place of assembly or foot traffic and subject to</p> <p>14 tampering, is it allowed for the switch to be</p> <p>15 located just inside the door to the boiler room?"</p> <p>16 Reply: "Yes."</p> <p>17 CHAIRMAN MORELOCK: And that should</p> <p>18 be "tampering" instead of "tempering"?</p> <p>19 MR. TOTH: Thank you, Mr. Chairman.</p> <p>20 At least I said "tampering," right?</p> <p>21 CHAIRMAN MORELOCK: You did.</p> <p>22 MR. TOTH: Okay. Good.</p> <p>23 So now we're looking at Inquiry 8</p> <p>24 with the correction there: "When an existing</p> <p>25 high-pressure boiler installation do not include a</p>	<p style="text-align: right;">Page 95</p> <p>1 manually operated remote shutdown switch, is it</p> <p>2 required that these switches be retroactively</p> <p>3 installed to boilers installed in the state of</p> <p>4 Tennessee?</p> <p>5 Reply is no.</p> <p>6 The last inquiry, Number 9: "In the</p> <p>7 state of Tennessee, is a manually operated remote</p> <p>8 shut-down switch required for installations of</p> <p>9 boilers defined under Section 4 of the ASME code</p> <p>10 for heating boilers, low-pressure boilers?"</p> <p>11 Reply: "No."</p> <p>12 And that's all of the inquiries, and</p> <p>13 I'm open for any discussion.</p> <p>14 CHAIRMAN MORELOCK: What about an</p> <p>15 electric boiler?</p> <p>16 MR. TOTH: Electric power boiler?</p> <p>17 Is it a power boiler?</p> <p>18 CHAIRMAN MORELOCK: They list them.</p> <p>19 I've never seen one.</p> <p>20 MR. TOTH: Oh, yeah. They are.</p> <p>21 But it doesn't say -- kind of, to back up your</p> <p>22 question, because the first inquiry talks about</p> <p>23 power boilers.</p> <p>24 CHAIRMAN MORELOCK: Okay.</p> <p>25 MR. TOTH: That's the first</p>
<p style="text-align: right;">Page 96</p> <p>1 inquiry. It talks about power boilers, be it gas,</p> <p>2 oil, electric.</p> <p>3 CHAIRMAN MORELOCK: Okay.</p> <p>4 MR. TOTH: Now, when we talk about</p> <p>5 what does it do, when you hit the e-stop, that's a</p> <p>6 different subject.</p> <p>7 CHAIRMAN MORELOCK: Right. And</p> <p>8 that's why I was asking, because you're saying</p> <p>9 that it would shut off the fuel.</p> <p>10 MR. TOTH: Okay. So in this case</p> <p>11 here, when we look at it -- and I think that this</p> <p>12 has been a misinterpretation by individuals for</p> <p>13 quite a while -- When you look at the code and the</p> <p>14 code talks about e-stops, what the code is going</p> <p>15 to say is they're going to talk about fuel and</p> <p>16 energy source. Okay? As we know, energy is heat,</p> <p>17 right? It's not just electricity.</p> <p>18 The reason why in the codes we put</p> <p>19 fuel and energy when we're talking about an</p> <p>20 e-stop, we're talking about tripping the fuel</p> <p>21 source, if it's a gas/oil. And then if we're</p> <p>22 talking about tripping the energy source, we're</p> <p>23 referring to electricity for an electrical boiler.</p> <p>24 We're not referring to tripping all the power to</p> <p>25 the boiler. Because there are situations -- and</p>	<p style="text-align: right;">Page 97</p> <p>1 I'll just go into that since you brought it up.</p> <p>2 CHAIRMAN MORELOCK: Feed water</p> <p>3 pumps and things like that.</p> <p>4 MR. TOTH: There are situations</p> <p>5 that we do not want to de-energize the entire</p> <p>6 boiler. There are situations where de-energizing</p> <p>7 the entire boiler could lead to more harm than</p> <p>8 good. So that's where that comes into play.</p> <p>9 MR. BAUGHMAN: Also, just to add a</p> <p>10 little bit to that, too. There are some boilers</p> <p>11 that if you tie the e-stop into the main fuel</p> <p>12 valve, the boiler continues to run. There's power</p> <p>13 boilers that have intermittent pilots that --</p> <p>14 i.e., Fulton, in particular -- and the boilers sit</p> <p>15 there and continue running. Even though you've</p> <p>16 cut the main fuel off, the pilot continues to be</p> <p>17 running, and it's still picking that up, and it</p> <p>18 doesn't know that the fuel valve has closed</p> <p>19 electronically. You can cut off the electrical to</p> <p>20 it and the boiler continues to run and can build</p> <p>21 steam on pilot alone.</p> <p>22 So we've talked about this in our</p> <p>23 meetings with contractors on where the best place</p> <p>24 is to install an e-stop in the circuitry. And we</p> <p>25 try to refer them back to the manufacturer,</p>

<p style="text-align: right;">Page 98</p> <p>1 because the manufacturer, as with us, our UL  2 listings and what have you and our drawings show  3 specifically where the e-stop gets installed at.  4 But we also had an e-stop installed on a  5 particular installation at a school years ago --  6 not all that many years ago -- but when they hit  7 the e-stop, it didn't shut the boiler off. The  8 on/off switch didn't shut it off. Nothing shut it  9 off. They evacuated the building. The customer  10 swore the devil was in the boiler, and I said turn  11 the main gas valve off, and if it doesn't shut it  12 off, I will agree Satan is in the boiler; but  13 otherwise, it will shut it off.  14                 So it's not a one-size-fits-all where  15 the e-stop gets installed at. And in here, of  16 course, we're going to address power boilers, but  17 there's a lot of atmospheric out there also that  18 have to be addressed.  19                 MR. TOTH: Right. And if I could,  20 to go upon that, I would like to see where the  21 particular boilers you're referring to have an  22 interrupted versus intermittent pilots.  23                 When we're talking about cutting off  24 the fuel, that pilot still has a gas valve, does  25 it not?</p>	<p style="text-align: right;">Page 99</p> <p>1                 MR. BAUGHMAN: Yes.  2                 MR. TOTH: Okay. We're cutting off  3 the fuel to that boiler. I think you are  4 absolutely correct when you say going back to the  5 manufacturer. As a matter of fact, a manufacturer  6 just recently -- Cleaver-Brooks Boilers have just  7 recently taken the space where they are wiring in  8 their e-stops back to the main fuel valves and  9 pilot valves away from pure interlocks that are  10 cutting out the boiler for that very purpose.  11                 And so there is a lot of work to be  12 done on that. However, when we look at this,  13 we're looking at high-pressure boilers,  14 atmospheric boilers -- I understand that. You  15 want to take that and run with it on a  16 low-pressure boiler, I understand that. That's a  17 separate instance than what we have here. As long  18 as we define it in the inquiry, just as  19 Mr. Morelock and I deal with on a regular basis  20 within code and working with interpretations, you  21 as a board can take my interpretation questions  22 and massage them to make sure that they answer the  23 question the way that you as a board feel it needs  24 to be asked and answered.  25                 MR. BAUGHMAN: I appreciate that</p>
<p style="text-align: right;">Page 100</p> <p>1 very much.  2                 MR. TOTH: Yeah. That's really how  3 it works.  4                 MR. BAUGHMAN: From a technical  5 side, there's so many things that are not a  6 one-size-fits-all that -- there's an education  7 that needs to be made out there in the industry as  8 we're taking this information and trying to  9 produce it back to the contractors that are  10 installing boilers or putting e-stops in and so  11 forth. And that's its own set of problems in  12 itself, is how to get this information out there  13 to the industry.  14                 MR. TOTH: And again, when we talk  15 about what the code is going to do and what the  16 code asks for or what the code says that needs to  17 be a minimum, that states where does it need to be  18 installed into, what does it need to be doing.  19 The code's going to state that it's going to cut  20 off -- in the case of a gas boiler -- it's going  21 to cut off your fuel source. That's it. Okay?  22 If this board decides that you want to take the  23 point of the interpretation and you want to say  24 no, it needs to cut off everything and the porch  25 light, you can do that, too.</p>	<p style="text-align: right;">Page 101</p> <p>1                 The issue is, is when we've got a lot  2 of verbal. And we, actually -- Mr. Morelock and  3 I, actually, kind of had a little bit of  4 discussion about this earlier -- not this, but  5 about interpretations and why we worked hand in  6 hand to get interpretations written down because  7 there's a lot of word of mouth. One day, you tell  8 somebody this; the next day the same subject comes  9 up but you've got something else on your mind and  10 you tell them something different.  11                 We need to get it to a point where  12 it's standardized that we don't have one inspector  13 telling somebody one thing, another inspector  14 telling somebody something else. That's been a  15 battle ever since I've been involved.  16                 MR. BOWERS: I think it should be  17 simple because -- you know, make it as simple as  18 possible. Because as inspector, you look at it  19 and say, well -- the inspector is going to -- the  20 client is going to ask me, "Well, how do I wire  21 that?"  22                 And I'll say, "Hey, I'm not an  23 electrician technician," you know. And in a lot  24 of cases, package boilers were shutting the switch  25 off that actually probably connects to a solenoid</p>

<p style="text-align: right;">Page 102</p> <p>1 that shuts the gas line off. I don't know that.  2 Where you mention going to the manufacturer,  3 because you tell somebody to do it the wrong way  4 and it ruins the unit, and they look at it and  5 say, "Well, how come you told us to do it this  6 way?"</p> <p>7 MR. TOTH: Well, again -- and  8 Mr. Bowers, I agree with that. But what we're not  9 saying is, is we're not requiring what has to  10 happen by code is that it shuts off the fuel. Or  11 if it's electrical energy that's causing the heat,  12 it's shutting that energy source down. That's  13 required by code. Okay?</p> <p>14 What's not required by code is to  15 turn off the electrical power to the controls.  16 That's not required by code. So if somebody  17 chooses to do that, unless you find that that puts  18 that boiler in danger, which means -- as somebody  19 has been in the industry for a while will tell  20 you -- that there are situations where you could  21 cause more harm by doing that than allowing the  22 controls to do what they're supposed to be doing.  23 Okay?</p> <p>24 So what I'm here to say is, is it  25 required for it to shut off all electrical power?</p>	<p style="text-align: right;">Page 103</p> <p>1 No, it's not.</p> <p>2 MR. BAUGHMAN: While you're looking  3 at that right quick, one of the things that I  4 wanted to clarify was in CSD-1 under the CE-110,  5 is that it says it should maybe at least shut off  6 the fuel or energy supply.</p> <p>7 MR. TOTH: Because of what type of  8 boiler it is.</p> <p>9 MR. BAUGHMAN: Yes. And then the  10 other is it says shut off the fuel. So many  11 contractors interpret that as "I'm going to wire  12 it into the gas valve." Well, it should say shut  13 off all the fuel. And the other is if you wire it  14 into the gas valve, in your dual fuel, you can  15 still operate off of your secondary fuel. If all  16 you're doing is shutting off your gas valve, you  17 haven't affected your oil side.</p> <p>18 MR. TOTH: Well, does that come  19 down to giving the individual the knowledge to  20 say, "This is what needs to be done. Now, you  21 can't be held responsible for ignorance."</p> <p>22 MR. BAUGHMAN: Yes. So my  23 interpretation or my suggestion is, is that it's  24 worded to where it shuts off all fuel supply to  25 the boiler. That would mean gas, oil, whatever</p>
<p style="text-align: right;">Page 104</p> <p>1 propane they might have as a secondary fuel, but  2 that way, all the fuel supply is taken into  3 consideration instead of somebody just looking at  4 the gas side.</p> <p>5 MR. TOTH: Okay. I agree with  6 that, but when you look at Inquiry Number 4, it  7 actually does state that. It states that in the  8 question, but then if you wanted to put repeat the  9 word all, you can.</p> <p>10 MR. BAUGHMAN: Got you. It does  11 say that, disconnect all fuel.</p> <p>12 MR. TOTH: Yeah. So you can, you  13 know; whereas, if the board comes back and says,  14 "We're going to word it this way and this is how  15 it's going to be published," and that word is shut  16 off all of the fuel, then that's satisfactory,  17 because that answers both of them.</p> <p>18 And I sure hope nobody is wiring it  19 directly to the gas valves and not through the  20 controller.</p> <p>21 MR. BAUGHMAN: Seen it.</p> <p>22 MR. TOTH: I know. We've all seen  23 it. It's just, again, we've got to be careful  24 when you assign interpretations. And we run  25 through that all the time where now you end up</p>	<p style="text-align: right;">Page 105</p> <p>1 being a consultant, and that's not your  2 responsibility as a board. It's answer the  3 question. If you can answer it with a yes or no  4 answer, answer yes or no. If you put a little bit  5 of a blurb on the end of it to shed a little bit  6 more light, so be it. But we don't want to get  7 into the laundry list because something is going  8 to get missed.</p> <p>9 CHAIRMAN MORELOCK: Well, even  10 adding that little bit on can be viewed as  11 consulting as well.</p> <p>12 MR. TOTH: Sure. Absolutely. So  13 you've got to be careful with that.</p> <p>14 There are quite a few here, and I  15 just want to make sure that the board is very  16 clear and I've been able to answer any questions  17 of the intent of this, such as, you know, retro  18 fitting boiler rooms. My response is a response  19 that came from the NBIC. It's not my personal  20 response. Okay? So I want to be perfectly clear  21 on that. My response of retrofit, no, or  22 retroactively, is coming from the NBIC. It's your  23 choice to say, "If we find a boiler that does not  24 have an e-stop and it's been installed for  25 20 years, now you get into how are you going to</p>

<p style="text-align: right;">Page 106</p> <p>1 handle that and what time frame you're going to 2 give somebody to come back up to code. That's on 3 y'all.</p> <p>4           CHAIRMAN MORELOCK: Well, and so 5 referencing NBIC is the proper thing to do, even 6 to the point of paragraph, if need be. That 7 way -- these interpretations are published out on 8 the Tennessee website. Anybody can go read those, 9 and a lot of those people that would read those 10 probably did not even have the code book. So if 11 we point them where to go, they can at least go 12 read it for themselves. But we don't want to tell 13 them what it says because, again, that's 14 consulting, so...</p> <p>15           MR. TOTH: I would be very 16 interested in knowing the position of the board in 17 regards to preexisting installations. Because I 18 know Chief Chapman and his staff has been very 19 diligent with requiring e-stops. Now, we're going 20 to clarify, you know, how they need to be 21 connected. But I'm very interested in seeing 22 these boiler installations, because it's only been 23 since 2007 or just before that that we started 24 doing installation permits.</p> <p>25           MR. BOWERS: Question here, to go</p>	<p style="text-align: right;">Page 107</p> <p>1 back. At one time we were putting e-stops -- we 2 were only doing retroactive back to 2006. 3 Anything that was put in before 2006, I guess, it 4 was an unofficial grandfathered in. Then it was, 5 like, two years ago the chief came back and says, 6 "No. All preexisting need to have e-stops." So 7 this has been a couple years that we've gone back 8 and tried to get the preexisting ones that were 9 put in before 2006.</p> <p>10           MR. TOTH: And I would say that 11 that date of 2006 probably coincides with the 12 requiring of state installation permits. If I 13 were to guess, that was probably when we started 14 those, which spells out and calls out e-stops.</p> <p>15           MR. BOWERS: But that was an 16 unofficial policy.</p> <p>17           MR. TOTH: And that's really at 18 the -- that response can be altered, in the 19 board's response, to include that. You know, that 20 states that any boiler installation that has 21 occurred, and you put a date, legal on what that 22 date should be, and you put it in the 23 interpretation. And anything installed after that 24 requires it, and anything before does not unless 25 there is some type of a change in the boiler</p>
<p style="text-align: right;">Page 108</p> <p>1 operation repairs or swapping or anything like 2 that.</p> <p>3           MR. BOWERS: Yeah. I agree we have 4 to make an interpretation because know we've got 5 ASME saying we have to put them in. We've got the 6 NBIC in Section F saying any preexisting is out, 7 and it doesn't give a date. So now we've got a 8 quandary of -- and it also talks about the latest 9 section of the 2016 -- 2019 section on 3.5.3.2 10 potable hot water -- potable water heaters have to 11 have an e-stop. So are we going to -- before we 12 were just going to 4,000 and above. According to 13 moving it from "should" to "shall," now we've got 14 potable hot water heaters, which we hadn't been 15 doing. Are we going to have to go back and start 16 making everybody put e-stops on potable hot water 17 heaters?</p> <p>18           MR. TOTH: And what code reference 19 is that?</p> <p>20           MR. BOWERS: That is the NBIC 2019 21 3.53.2 potable water.</p> <p>22           MR. TOTH: Part 3? Repairs and 23 alterations?</p> <p>24           MR. O'GUIN: Part 1.</p> <p>25           CHAIRMAN MORELOCK: Part 1 or 2.</p>	<p style="text-align: right;">Page 109</p> <p>1           MR. BOWERS: Number B. It says, "A 2 manually operated remote shut-down switch or 3 circuit breaker shall" -- now it says circuit 4 breaker -- shall be located just outside the 5 equipment room door and marked with easy 6 identification. Consideration shall be given to 7 the type and location of the switch to safeguard 8 against tampering.</p> <p>9           MR. TOTH: There you go.</p> <p>10           MR. BOWERS: Now, in Tennessee, we 11 go below the 200,000. So that should not be 12 covered under the NBIC because it doesn't have a 13 National Board stamp on it. So anything that's -- 14 if I'm looking at it right -- anything below the 15 200 is not covered by the NBIC.</p> <p>16           MR. TOTH: I haven't -- I'll be 17 honest with you, I haven't had a chance to look in 18 the other parts of the NBIC to see where all those 19 other changes are.</p> <p>20           MR. BOWERS: So are we going to 21 have to look at that part? Are we going to have 22 to start enforcing that part of it?</p> <p>23           MR. BAUGHMAN: That's a good 24 question.</p> <p>25           CHAIRMAN MORELOCK: Yes, that is a</p>

<p style="text-align: right;">Page 110</p> <p>1 good question.</p> <p>2 MR. O'GUIN: There had quite a few</p> <p>3 revisions in 2019 that we've been going through</p> <p>4 ourselves.</p> <p>5 CHAIRMAN MORELOCK: And as Mr. Toth</p> <p>6 has alluded to, we -- in our rule, we say we will</p> <p>7 accept the latest addition addenda of the NBIC, so</p> <p>8 we need to look at it because if there's something</p> <p>9 we don't like, then we'll have to do a board case</p> <p>10 or something to...</p> <p>11 MR. TOTH: And again, any of these</p> <p>12 inquiries can be held on their own, if need be, or</p> <p>13 removed for future --</p> <p>14 CHAIRMAN MORELOCK: Well, and that</p> <p>15 was Mr. Baughman's question. I guess my question</p> <p>16 to the board is do you want to take these</p> <p>17 individually and vote on them, or do you want to</p> <p>18 vote on them as a whole? And it's strictly up to</p> <p>19 the board's pleasure.</p> <p>20 MR. BAUGHMAN: I would take them</p> <p>21 individually, personally.</p> <p>22 MR. BOWERS: I agree.</p> <p>23 MR. TOTH: Okay. So what you're</p> <p>24 saying is would they still line up as BI-19-01?</p> <p>25 CHAIRMAN MORELOCK: Yes.</p>	<p style="text-align: right;">Page 111</p> <p>1 MR. TOTH: Because that's the</p> <p>2 course that we took for identification of</p> <p>3 interpretations, very similar to what we deal with</p> <p>4 at the ASME national board.</p> <p>5 CHAIRMAN MORELOCK: You know, under</p> <p>6 the topic of e-stops, yes, I would leave it under</p> <p>7 one interpretation.</p> <p>8 MR. TOTH: Right. And then you</p> <p>9 handle it and so you look at it and say do you</p> <p>10 agree with Inquiry 1, with the answer, if you</p> <p>11 leave as is or you revise it, and then handle it.</p> <p>12 CHAIRMAN MORELOCK: Right.</p> <p>13 MR. TOTH: And that's kind of how I</p> <p>14 introduced this, is go down through them</p> <p>15 individually.</p> <p>16 CHAIRMAN MORELOCK: Okay. So with</p> <p>17 that said, do I have a motion to vote this on an</p> <p>18 individual inquiry reply under the same</p> <p>19 interpretation number?</p> <p>20 MR. FOX: I'll make that motion.</p> <p>21 CHAIRMAN MORELOCK: Okay. Do I</p> <p>22 have a second?</p> <p>23 MR. BAUGHMAN: Second.</p> <p>24 CHAIRMAN MORELOCK: Okay.</p> <p>25 MR. BAUGHMAN: I'm going to need to</p>
<p style="text-align: right;">Page 112</p> <p>1 take a break here in just a minute.</p> <p>2 CHAIRMAN MORELOCK: Let's take a</p> <p>3 five-minute break, then.</p> <p>4 (Recess observed.)</p> <p>5 CHAIRMAN MORELOCK: So what we have</p> <p>6 before us is nine inquiries and nine proposed</p> <p>7 replies. We'll take them one at a time, and we'll</p> <p>8 let the board vote on them individually, even</p> <p>9 though it will be one interpretation. Fair</p> <p>10 enough?</p> <p>11 (No verbal response.)</p> <p>12 CHAIRMAN MORELOCK: All right. So</p> <p>13 with Inquiry 1 and Reply 1, Inquiry 1 is, "Is it</p> <p>14 required that all locations operating a power,</p> <p>15 parenthetical, high-pressure boiler, in Tennessee</p> <p>16 be fitted with a manually operated shut-down</p> <p>17 switch?"</p> <p>18 Proposed reply is yes.</p> <p>19 All in favor, say aye.</p> <p>20 (Affirmative response.)</p> <p>21 CHAIRMAN MORELOCK: Opposed?</p> <p>22 (No verbal response.)</p> <p>23 CHAIRMAN MORELOCK: Abstentions or</p> <p>24 not voting?</p> <p>25 (No verbal response.)</p>	<p style="text-align: right;">Page 113</p> <p>1 CHAIRMAN MORELOCK: Okay. So we've</p> <p>2 passed Number 1.</p> <p>3 Inquiry Number 2 --</p> <p>4 MR. BAUGHMAN: Hold on. I'm sorry.</p> <p>5 Just backing up a minute just so I can get</p> <p>6 clarification. So when we're saying a power</p> <p>7 boiler, a Section 1 boiler, can that be a boiler</p> <p>8 of any size as in, let's say, a Men's Wearhouse</p> <p>9 that's operating a 3.5-horse boiler?</p> <p>10 MR. TOTH: Definition is going to</p> <p>11 be 5 horsepower, 50 square feet of heating</p> <p>12 surface.</p> <p>13 MR. BAUGHMAN: Very good. Just</p> <p>14 want to make that clarification for the record so</p> <p>15 somebody's not going to come back and --</p> <p>16 MR. TOTH: Definition of a power</p> <p>17 boiler.</p> <p>18 CHAIRMAN MORELOCK: 800-3-3 has got</p> <p>19 that definition.</p> <p>20 MR. BAUGHMAN: Very good.</p> <p>21 MR. BOWERS: A quick question,</p> <p>22 another question on this first one. Are we</p> <p>23 saying -- okay. We're saying that, yes, it's</p> <p>24 going to be required, but then we haven't dealt</p> <p>25 with the issue of NBIC Section F preexisted.</p>

<p style="text-align: right;">Page 114</p> <p>1 MR. TOTH: That will be answered in 2 one of the other inquiries. 3 CHAIRMAN MORELOCK: Okay. Moving 4 along. 5 MR. TOTH: And Mr. Chairman, if I 6 may ask. 7 CHAIRMAN MORELOCK: Yes. 8 MR. TOTH: So just for 9 clarification, you're making a motion. Is there 10 going to be room for additional discussion before 11 you take the vote on it? 12 CHAIRMAN MORELOCK: Sure. 13 MR. TOTH: I just want to make sure 14 before you take the vote. 15 CHAIRMAN MORELOCK: Okay. Sure. 16 Yes. Okay. 17 Inquiry 2: "If Inquiry 1 is yes, is 18 it required that a manually operated remote 19 shutdown switch be installed at each means of 20 pedestrian egress from the boiler location, for 21 example, the boiler room?" 22 The proposed reply is yes. 23 So is there any discussion on that? 24 MR. BOWERS: Yes. In one of our 25 recent approvals of a variance, they had two</p>	<p style="text-align: right;">Page 115</p> <p>1 e-stops but it had five exits. So where do we 2 limit that? 3 MR. BAUGHMAN: You don't. 4 MR. TOTH: (Shakes head.) 5 MR. BOWERS: So we just approved 6 one, but are we going to go back and say -- so if 7 it has five means of egress, each means of egress 8 has to have an e-stop? 9 MR. TOTH: And if I may, 10 Mr. Chairman. 11 CHAIRMAN MORELOCK: Please do. 12 MR. TOTH: When we start looking at 13 safety light codes and things like that and you 14 start talking about means of egress, means of 15 egress is a door that's going to open outside. 16 Okay? Example, I've got a client that has four 17 doorways in their boiler room. Three of them led 18 to the exterior, a way of escape. It can be going 19 back into the building; it can be going outside. 20 One is an inward-swinging door that goes to an 21 electrical room. That's not a means of egress. 22 It's what is established as a means of egress. 23 If the codes, building code 24 enforcement came in, they would identify those 25 three as a means of egress and the fourth is not.</p>
<p style="text-align: right;">Page 116</p> <p>1 So anything that's identified as a means of egress 2 or a safety egress has to, by code, have an 3 e-stop. 4 MR. BAUGHMAN: In particular, in 5 that example, where that door would go into the 6 electrical room, if there was an additional door 7 from that electrical room that went to a point, 8 that would be a considered a point of egress, 9 also, as a means of exit. 10 MR. TOTH: As long as it's defined 11 as that. If it has one going out; however, if it 12 is an inward -- an outwardly swinging door going 13 into the electrical room, yes, it is. If it's an 14 inwardly swinging door where you have to open it 15 to open it back into the boiler room, no it's not. 16 MR. BAUGHMAN: Right. Well, and so 17 those means of egress will typically have an exit 18 sign also identified with it. 19 MR. TOTH: Absolutely. 20 MR. BOWERS: Thank you. 21 CHAIRMAN MORELOCK: Okay. So with 22 that being said, I guess my question is who 23 determines what is a means of egress? Who is 24 responsible for that? I'm assuming the owner, 25 owner-user, right?</p>	<p style="text-align: right;">Page 117</p> <p>1 MR. TOTH: Uh-huh. 2 CHAIRMAN MORELOCK: Okay. 3 MR. TOTH: And again -- 4 CHAIRMAN MORELOCK: In conjunction 5 with the boiler unit when they make a site visit. 6 MR. TOTH: Right. And it's -- you 7 go out -- Nokian Tyres is an example I gave you -- 8 when they go out, they do their inspections and 9 the installation, you're going to see where does 10 that door go, where do those doors go." And then 11 termination, is it a door that is designed for 12 escape, for egress? Yes, it is. 13 That electrical door in that boiler 14 room actually stays locked. It doesn't -- it will 15 not have -- and it's just an education thing where 16 you have to be educated and say, okay, how do I 17 get out of here if I'm on this side of the boiler 18 room? I go that way. 19 CHAIRMAN MORELOCK: All right. 20 Thank you. 21 Okay. So any other questions or 22 comments about Inquiry 2, proposed Reply 2? 23 (No verbal response.) 24 CHAIRMAN MORELOCK: Hearing none, 25 all in favor say aye.</p>

<p style="text-align: right;">Page 118</p> <p>1 (Affirmative response.)  2 CHAIRMAN MORELOCK: Opposed?  3 (No verbal response.)  4 CHAIRMAN MORELOCK: Abstentions?  5 (No verbal response.)  6 CHAIRMAN MORELOCK: Not voting?  7 (No verbal response.)  8 CHAIRMAN MORELOCK: Okay. So that  9 passes.  10 Moving on to Inquiry 3: "Where a  11 boiler is located indoors in a facility and not in  12 an equipment room, for example, a boiler room,  13 mechanical room, et cetera, is it still required  14 to have a manually operated remote shut-down  15 switch installed?"  16 The proposed reply is, "Yes. The  17 manually operated shut-down switch, parenthetical,  18 e-stop, shall be locked within 50 feet, 15 meters,  19 of the boilers along the primary egress routes  20 from the boiler."  21 So are there any questions or  22 comments about that?  23 MR. BAUGHMAN: Is that 50 foot --  24 is there a code reference that goes to that  25 50 foot?</p>	<p style="text-align: right;">Page 119</p> <p>1 MR. TOTH: You're going to find  2 that -- you'll find that also in NFPA 79, which  3 covers e-stops.  4 MR. BAUGHMAN: Is there any other  5 reference? I didn't see anything in CSD-1. So is  6 there any other reference --  7 MR. TOTH: There's not going to be  8 a reference --  9 MR. BAUGHMAN: -- besides NFPA 79?  10 MR. TOTH: No. What they're going  11 to do is they're going to point back. So NFPA 85,  12 that will point back to 79. I'm trying to pick my  13 brain for NBIC. I can't spit out the reference,  14 Chris. Sorry about that.  15 MR. O'GUIN: NBIC part 1 does spell  16 that out. Just --  17 MR. TOTH: It's under  18 installations.  19 MR. CHAPMAN: Yeah. It's under  20 Part 1.  21 MR. BAUGHMAN: Good. Okay. I just  22 wanted to make sure that we knew where to be able  23 to point people.  24 CHAIRMAN MORELOCK: Okay. And so  25 this is what drives people nuts on code</p>
<p style="text-align: right;">Page 120</p> <p>1 committees, is the wordsmithing. And I'm  2 apologizing now, but I'm going to go ahead and  3 ask. So above we say, in Inquiry 2, pedestrian  4 egress. Now we're saying in 3, primary egress.  5 So what's the difference?  6 MR. BAUGHMAN: That's a good  7 question.  8 MR. TOTH: What's the difference?  9 Primary, I would say an additional word,  10 pedestrian under primary. Now, the reason is, and  11 the reason why I say this, is that if we have a  12 boiler sitting in the middle of this room, if I  13 jump over this rail and head out that way, can I  14 get out of the space of the boiler? Yes.  15 CHAIRMAN MORELOCK: Climb through a  16 window or whatever, right?  17 MR. TOTH: Yeah. What is your  18 primary ways of egress if it is the primary path,  19 if you would.  20 CHAIRMAN MORELOCK: Well, and so --  21 MR. TOTH: A pedestrian.  22 CHAIRMAN MORELOCK: And so you just  23 told us that if it's got an exit sign over it,  24 that's your primary egress, right?  25 MR. TOTH: That's from a boiler</p>	<p style="text-align: right;">Page 121</p> <p>1 room.  2 MR. FOX: Let me interrupt for just  3 one second. This is like -- what he's talking  4 about is a prime example of Carlex.  5 MR. TOTH: Carlex is a good  6 example.  7 MR. FOX: Carlex does not have a  8 boiler room. The boilers are located inside the  9 plant. However, there are two main walkways in  10 and out of there that people go, entering and  11 leaving the area.  12 CHAIRMAN MORELOCK: Okay. So my  13 question is if I put pedestrian egress in Reply 3,  14 would that work and be consistent? I'm just  15 asking.  16 MR. TOTH: It's really -- no. Yes.  17 It's -- again, it's wordsmithing, but it's really  18 what the board feels comfortable with. Will it  19 add to confusion or leave confusion is what you're  20 trying to get to.  21 CHAIRMAN MORELOCK: Right. You've  22 got two statements, primary egress and pedestrian  23 egress.  24 MR. BAUGHMAN: Make them  25 consistent.</p>

<p style="text-align: right;">Page 122</p> <p>1 CHAIRMAN MORELOCK: Yes.</p> <p>2 MR. TOTH: Yes. I'm comfortable</p> <p>3 with either way.</p> <p>4 MR. BAUGHMAN: I would go with the</p> <p>5 pedestrian.</p> <p>6 CHAIRMAN MORELOCK: Okay.</p> <p>7 MR. HARGROVE: Yeah, that makes</p> <p>8 sense.</p> <p>9 MR. BAUGHMAN: Well, and then</p> <p>10 again, it's to someone's judgment because its</p> <p>11 egress routes, so someone has to determine are</p> <p>12 there two means of going left and right. There</p> <p>13 again, that's owner --</p> <p>14 MR. TOTH: And that really comes</p> <p>15 down to when the inspection unit goes out and</p> <p>16 inspects, they're asking the question on the</p> <p>17 permit. They're looking for information. There's</p> <p>18 also the ability for the installer or the</p> <p>19 owner-user to all but leave just the necessary</p> <p>20 equipment and say, "Hey, come and inspect my</p> <p>21 boiler room," and you go out there and realize</p> <p>22 that you have multiple egress points on an</p> <p>23 installation in the middle of a plant, but you</p> <p>24 only have one e-stop.</p> <p>25 CHAIRMAN MORELOCK: Right.</p>	<p style="text-align: right;">Page 123</p> <p>1 MR. TOTH: Well, that inspector</p> <p>2 will come out and say, well, is this another --</p> <p>3 you tell me what your pedestrian egress is.</p> <p>4 CHAIRMAN MORELOCK: Right. And</p> <p>5 that's.</p> <p>6 MR. TOTH: At a point like this or</p> <p>7 you see exits and say -- I ask the question, well,</p> <p>8 what if I'm back here, which way am I going.</p> <p>9 CHAIRMAN MORELOCK: Well --</p> <p>10 MR. TOTH: And so then that's when</p> <p>11 they say you've got to have another e-stop.</p> <p>12 CHAIRMAN MORELOCK: So being</p> <p>13 consistent with the terminology will minimize</p> <p>14 confusion.</p> <p>15 MR. TOTH: Absolutely.</p> <p>16 CHAIRMAN MORELOCK: Okay. Good</p> <p>17 deal. So the only thing we've changed is on</p> <p>18 Reply 3, is we're going to say yes, the manually</p> <p>19 operated remote shut-down switch, parenthetical,</p> <p>20 e-stop, shall be located within 50 feet,</p> <p>21 parenthetical, 15 meters, of the boilers along the</p> <p>22 pedestrian egress routes from the boiler.</p> <p>23 Any other questions or comments?</p> <p>24 MR. BAUGHMAN: No. And</p> <p>25 particularly, just like with Carlex, I was</p>
<p style="text-align: right;">Page 124</p> <p>1 thinking you've got these two boilers that are</p> <p>2 somewhat spread out. We've got 50 feet of</p> <p>3 distance between one and the other, give or take,</p> <p>4 but close. But then it's, like, my question --</p> <p>5 and I didn't bring it up during the time -- but it</p> <p>6 was, well, we've got an e-stop within 50 feet; is</p> <p>7 it within 50 feet of both boilers in the center,</p> <p>8 or is it 50 feet from one boiler, which means it</p> <p>9 wouldn't meet 50 feet from the other.</p> <p>10 I didn't bring that up, but there</p> <p>11 again, those are things that the inspectors will</p> <p>12 look at when they're there to be able to figure</p> <p>13 out.</p> <p>14 MR. TOTH: And because of -- and</p> <p>15 you've got to use -- yes, you've got to use --</p> <p>16 yes, it says 50 feet. But you also have to use</p> <p>17 some common knowledge or understanding of where</p> <p>18 we're at. You literally have almost a tunnel</p> <p>19 right there of things going on here. And</p> <p>20 pedestrian egress is either that way or this way.</p> <p>21 Where are your e-stops? I'm heading out this way.</p> <p>22 If I'm over on, you know, Boiler 2 and something</p> <p>23 happens on the back end of it, I'm heading past</p> <p>24 Boiler Number 1, you see. That's my egress. I'm</p> <p>25 hitting something on the way out.</p>	<p style="text-align: right;">Page 125</p> <p>1 MR. BOWERS: As an inspector, I</p> <p>2 look for it -- like, a pedestrian way and it's</p> <p>3 obvious where it's at. You don't want to ask the</p> <p>4 operator where's that e-stop? Oh, it's behind</p> <p>5 that beam over there.</p> <p>6 MR. TOTH: Oh, no. It's got to --</p> <p>7 you know, you go on the deep, and that can be</p> <p>8 something else that can be addressed at a later</p> <p>9 date. But when you start looking at the</p> <p>10 requirements for e-stops, e-stops are very</p> <p>11 specific when you look at NFPA 79 about the</p> <p>12 colors, the colors and the placards that show</p> <p>13 where the e-stops are at and what colors those are</p> <p>14 supposed to be. As we all know, we see on a</p> <p>15 regular basis the colors yellow and red. And the</p> <p>16 reason why we see those colors is because they're</p> <p>17 spelled out in NFPA 79 as the colors that will be</p> <p>18 utilized for e-stops.</p> <p>19 CHAIRMAN MORELOCK: All right. I'm</p> <p>20 going to call the question. All in favor say aye.</p> <p>21 (Affirmative response.)</p> <p>22 CHAIRMAN MORELOCK: Opposed?</p> <p>23 (No verbal response.)</p> <p>24 CHAIRMAN MORELOCK: Abstentions?</p> <p>25 (No verbal response.)</p>

<p style="text-align: right;">Page 126</p> <p>1 CHAIRMAN MORELOCK: Not voting? 2 (No verbal response.) 3 CHAIRMAN MORELOCK: Okay. That 4 takes care of Inquiry and Reply Number 3. 5 Moving on to 4. Inquiry Number 4 6 says, "For a boiler equipped with a power burner, 7 is it required for the manually operated remote 8 shut-down switch to disconnect all fuel and 9 electrical power to the boiler?" 10 Proposed reply is, "No. The switch 11 need only shut off the fuel input to the boiler, 12 for example, burner." 13 Questions? Comments? 14 MR. BAUGHMAN: Why are we 15 addressing just the power burner in this inquiry? 16 MR. TOTH: Because I like to be 17 specific. 18 MR. BAUGHMAN: Well, and I don't 19 think -- 20 MR. TOTH: And again, we're talking 21 about power burners, and we're referring to power 22 boilers. Okay? 23 MR. BAUGHMAN: Well, but this -- 24 MR. TOTH: Well, now, you can have 25 a power -- you -- technically, you can have a</p>	<p style="text-align: right;">Page 127</p> <p>1 power burner on a low-pressure boiler. So, 2 Mr. Baughman, this is a great example for you to 3 interject in the inquiry what the intent is. And 4 the intent here is talking about power burners on 5 power boilers. 6 MR. BAUGHMAN: Well, and so we've 7 got -- specifically, what we've done in this 8 inquiry is we've narrowed down something that may 9 give somewhat confusion in the boiler industry. 10 And I want to make sure that we address this 11 inquiry to where it says for a boiler equipped -- 12 or for a boiler, not so much just specifying power 13 burners, because -- 14 MR. TOTH: Sure. Absolutely. 15 MR. BAUGHMAN: And for one, because 16 the e-stops, also, as we get down to another 17 inquiry down below, CSD-1 doesn't separate out 18 power versus Section 1 versus Section 4. 19 MR. TOTH: No, it does not. 20 MR. BAUGHMAN: So that's where I'd 21 like to take this out of being equipped with just 22 a power burner. Now, this is just my input, and 23 I'll listen to what others have to say about it, 24 too. 25 But my end of it is for a boiler,</p>
<p style="text-align: right;">Page 128</p> <p>1 Section 1 and Section 4, I believe that it should 2 be able to, according to the code, cut off the 3 fuel input. I'm not so much a fan of cutting off 4 the electrical to the boiler. That's my point of 5 view. 6 MR. BOWERS: Could you change it to 7 fuel burner instead of power burner? Would that 8 be -- 9 MR. TOTH: Well, I think that 10 Mr. Baughman made up a good point, and so do you, 11 Mr. Bowers, is that do we want this to 12 specifically address all boilers, this inquiry? 13 Or is the intent of this inquiry to just represent 14 power boilers? The reason is, is because until 15 recently, the thought of requiring e-stops or 16 enforcing e-stops on low-pressure boilers has not 17 been one that has been enforced with the State of 18 Tennessee. 19 CHAIRMAN MORELOCK: Well, your 20 statement of need specifically says assigned to 21 high-pressure boilers. 22 MR. TOTH: Right. And so -- 23 CHAIRMAN MORELOCK: And so that 24 would be the intent for all the inquiries, right? 25 MR. TOTH: Yeah. So where I'm</p>	<p style="text-align: right;">Page 129</p> <p>1 going with this is be careful when we start taking 2 out stuff and not adding the proper definition. 3 If somebody reads that inquiry and that answer or 4 that reply independently, they're going to put all 5 boilers in there. 6 MR. BAUGHMAN: Well, and so we're 7 saying that this addresses the power boilers, but 8 yet our last inquiry is going to be addressing low 9 pressure. So that doesn't necessarily hold true 10 for what all this discussion is about. 11 MR. TOTH: But it also addresses 12 exactly what -- in that last inquiry; whereas, 13 this one does not. 14 MR. BAUGHMAN: Okay. It still 15 leaves some room for some confusion. 16 CHAIRMAN MORELOCK: Well, to 17 clarify it, you could make Reply 8 -- Inquiry 8 18 and Reply 8 a separate interpretation just for 19 Section 4 boilers. 20 MR. TOTH: And, Mr. Chairman, that 21 could be something that I'd be happy to work with 22 and come back in December and work with anybody 23 else who's here and submit it to address 24 low-pressure boilers because there has been 25 changes made.</p>

<p style="text-align: right;">Page 130</p> <p>1 CHAIRMAN MORELOCK: Okay. I think 2 that's a great recommendation. 3 MR. TOTH: And so we can remove 4 that last inquiry. But getting back to Inquiry 5 Number 4 for a second, I think Mr. Bowers raised a 6 good question because the intent of this that is 7 not written here is Number 1, power boiler; 8 Number 2, fossil fuel, okay, natural gas/oil. 9 Neither one of those did I mention. Okay? In my 10 mind, they were implied. Obviously, it doesn't 11 work that way, does it? 12 So what I think needs to be done with 13 this inquiry is to not only address fuel burning 14 boilers but also the electric boilers. Okay? But 15 if we just address -- the difference between the 16 two is electric boilers, if I turn off the energy 17 source to those boilers, it doesn't matter what 18 happens. It's off. We're talking about elements, 19 either resistant or arc or whatever. It's done. 20 But here, I want to be very specific as to those 21 fuel-burning boilers. Does that make sense? 22 MR. BOWERS: Yes. 23 MR. TOTH: And so identifying, are 24 we talking about fuel-burning boilers? 25 Fuel-burning power, power boilers is really where</p>	<p style="text-align: right;">Page 131</p> <p>1 I'm looking at. 2 So for -- and then in the case if I 3 were to amend this inquiry myself, I would suggest 4 "for a fuel-burning powered boiler," and then 5 remove "equipped" with a power burner, as 6 Mr. Baughman alluded to, and just go on with the 7 rest of the inquiry. 8 CHAIRMAN MORELOCK: Okay. So the 9 amended Inquiry 4 would read, "For a fuel-burning 10 power boiler, is it required for the manually 11 operated remote shut-down switch to disconnect all 12 fuel and electrical power to the boiler," correct? 13 MR. TOTH: Correct. 14 CHAIRMAN MORELOCK: And then your 15 reply would be, "No. The switch need only shut 16 off the fuel" -- do you want to say fuel input or 17 fuel source? 18 MR. TOTH: Either one. 19 CHAIRMAN MORELOCK: Okay. 20 MR. TOTH: And I believe we had 21 mentioned it in previous discussion, the switch 22 need only shut off all the fuel. 23 CHAIRMAN MORELOCK: Okay. All 24 right. So we'll say the revised Reply 4 is, "No. 25 The switch only" -- you want to say "need to shut</p>
<p style="text-align: right;">Page 132</p> <p>1 off"?</p> <p>2 MR. TOTH: It's wordsmithing. 3 CHAIRMAN MORELOCK: It is. Just 4 say, "The switch need only shut off all the fuel 5 input to the boiler, for example, burner," right? 6 MR. TOTH: Yes. 7 CHAIRMAN MORELOCK: Okay. Any 8 other comments on that? 9 (No verbal response.) 10 CHAIRMAN MORELOCK: Hearing none, 11 all in favor say aye. 12 (Affirmative response.) 13 CHAIRMAN MORELOCK: Opposed? 14 (No verbal response.) 15 CHAIRMAN MORELOCK: Abstentions? 16 (No verbal response.) 17 CHAIRMAN MORELOCK: Not voting? 18 (No verbal response.) 19 CHAIRMAN MORELOCK: So we've got 20 that one passed as amended. 21 Going on to Inquiry 5. "Is it 22 required for all high-pressure boilers installed 23 in a location, for example, a boiler room, 24 mechanical room, facility location, et cetera, to 25 be electrically connected to a single manually</p>	<p style="text-align: right;">Page 133</p> <p>1 operated remote shut-down switch, for example, 2 e-stop, installed at all points of pedestrian 3 egress, where the activation of the switch shall 4 actuate the master fuel trip relays on all boilers 5 within the location?" 6 And then the proposed reply would be, 7 "No. However, this does not restrict the 8 owner-user from doing so if they choose." 9 Any comments/questions about that? 10 MR. HARGROVE: Mr. Chairman, I'd 11 like to ask the chief inspector and the associate 12 inspector. 13 In your opinion, do you think this is 14 a safety issue with regard to shutting down all 15 the boilers or just one? 16 MR. CHAPMAN: My personal opinion 17 on that -- and I'm going to speak personal -- is 18 when something happens, you panic. So it's all 19 depending on what is under the product that you're 20 making. I'm not going to take and say, okay, did 21 I hit the right one. I'm going to hit one and 22 keep going. That's me. And even though -- 23 because, you know, I look at it as if it's 24 something that critical where you have to hit that 25 button to shut a boiler down, you don't know</p>

<p style="text-align: right;">Page 134</p> <p>1 exactly what's going on.</p> <p>2 MR. HARGROVE: Or which boiler.</p> <p>3 MR. CHAPMAN: Or which boiler.</p> <p>4 But, you know, if -- you can always relay it back</p> <p>5 off.</p> <p>6 CHAIRMAN MORELOCK: Well, and my</p> <p>7 only example of that would be, working in a</p> <p>8 chemical plant, if you have a boiler that's in</p> <p>9 trouble, yes, by all means you want to shut that</p> <p>10 down.</p> <p>11 MR. CHAPMAN: Yes.</p> <p>12 CHAIRMAN MORELOCK: But if you shut</p> <p>13 down all my other boilers and I lose my steam</p> <p>14 source and I start freezing up polymer lines, I'm</p> <p>15 going to have more problems than just a boiler.</p> <p>16 MR. CHAPMAN: Well, you see, and</p> <p>17 that's what I mean by it's all depending on what</p> <p>18 the situation is.</p> <p>19 CHAIRMAN MORELOCK: Yes.</p> <p>20 MR. CHAPMAN: You know, because,</p> <p>21 like, if you're in a standard boiler room and</p> <p>22 something happened, on that same example on</p> <p>23 that -- take, for instance, the fuel. If there's</p> <p>24 a fire going on in there, you basically don't care</p> <p>25 what's going to happen outside the plant. You</p>	<p style="text-align: right;">Page 135</p> <p>1 need to try to get that boiler shut down.</p> <p>2 CHAIRMAN MORELOCK: Oh, I agree</p> <p>3 with that.</p> <p>4 MR. CHAPMAN: Yeah. And see,</p> <p>5 that's the reason I say it's all depending on what</p> <p>6 the situation is.</p> <p>7 MR. BOWERS: Could we do like the</p> <p>8 NBIC and say "should"? Because it relates to the</p> <p>9 situation.</p> <p>10 MR. HARGROVE: Yeah. I wanted the</p> <p>11 board to talk about this and the inspector.</p> <p>12 MR. O'GUIN: I think if we don't</p> <p>13 require it to be one e-stop, you're going to be</p> <p>14 opening up for -- or everybody is going to be</p> <p>15 wanting to put multiple e-stops in at doors and</p> <p>16 you're going to be running into issues. Because</p> <p>17 if one is about to blow up and you've got five,</p> <p>18 you want them all killed anyway, because you're</p> <p>19 not worried about the process. You're worried</p> <p>20 about the safety of the public and the people in</p> <p>21 the facility. So you can go back -- once in a</p> <p>22 safe condition, you can go back and light your</p> <p>23 other four boilers off to possibly prevent issues</p> <p>24 in your processing plant. But at that current</p> <p>25 time, at the emergency situation, you want to kill</p>
<p style="text-align: right;">Page 136</p> <p>1 the hazard.</p> <p>2 Now, that's my opinion.</p> <p>3 CHAIRMAN MORELOCK: Yeah, I want to</p> <p>4 stop the hazard. I'm just trying to balance</p> <p>5 out -- I don't want to create more problems while</p> <p>6 eliminating others.</p> <p>7 MR. CHAPMAN: Exactly.</p> <p>8 CHAIRMAN MORELOCK: That could be</p> <p>9 just as bad as a boiler blowing up.</p> <p>10 MR. TOTH: Well, Mr. Chairman, if I</p> <p>11 can interject. And I understand the situation,</p> <p>12 and if anybody knows me, they know I'm all about</p> <p>13 safety. Let's kind of look at it from the point</p> <p>14 of where are these e-stops at? These e-stops are</p> <p>15 together. Doesn't matter if it's one boiler, two</p> <p>16 boilers, five boilers. They're there. Okay?</p> <p>17 They're all together. If there is a big enough</p> <p>18 issue that's going on and it's unidentifiable</p> <p>19 which boilers is being affected by it, hitting one</p> <p>20 button, hitting five buttons is a matter of</p> <p>21 probably one, one-and-a-half seconds, two seconds,</p> <p>22 at the most. It's not a, "Let me see. I've got</p> <p>23 Boiler Number 2. Which one is Boiler Number 2?"</p> <p>24 That's not the case.</p> <p>25 Number 2 is all about training.</p>	<p style="text-align: right;">Page 137</p> <p>1 These individuals should be trained and should</p> <p>2 understand. If it's their responsibility for the</p> <p>3 safe operation of their boilers, they should be</p> <p>4 trained accordingly. Panic is panic. You can't</p> <p>5 say that it's one button and the boiler starts</p> <p>6 going up, and that person is not just going to run</p> <p>7 past it. Okay? So it's not really about the</p> <p>8 number of e-stops.</p> <p>9 Another situation that you're running</p> <p>10 into is you have a hospital. So we had a variance</p> <p>11 today where we had a hospital. That hospital has</p> <p>12 four boilers. Right now that hospital has two</p> <p>13 e-stops. When do you think they check those</p> <p>14 e-stops to make sure they're working properly?</p> <p>15 Never. They never check them. Because if they</p> <p>16 hit that e-stop, it's going to kill all the</p> <p>17 boilers and so the hospital -- yes. Okay. We can</p> <p>18 restart it. Well, what happens if we have issues</p> <p>19 with restarting it? There's all kinds of what</p> <p>20 ifs, if we look at it.</p> <p>21 Now, you look at a company like</p> <p>22 Nokian, Nokian doesn't have a problem with that.</p> <p>23 That's why I put it in here. It does not restrict</p> <p>24 the owner-user from having one e-stop to kill all</p> <p>25 their boilers. They're going to have two boilers.</p>

<p style="text-align: right;">Page 138</p> <p>1 Eventually, they're going to have four boilers.  2 We talked about it. And they said, "No, we're  3 fine. If we're going to test it, it'll be fine.  4 I'll call over here to production and we'll  5 schedule it where they're not in the middle of it  6 and then we'll test our e-stop."  7           But when we say that we're doing it  8 for safety, having an e-stop, no matter if it's  9 for one boiler or for five boilers, you have the  10 e-stops there. They are installed. They're not  11 one e-stop is over here for Boiler Number 1, and  12 one e-stop is way over here for Boiler Number 2 --  13 no. They're at the point of egress. I've been  14 doing this a long time. Okay? Only recently did  15 we find that we have a lot of people that are  16 going away from it and saying, "We're going to  17 have one e-stop that kills all boilers," because  18 it will affect the process. And I promise you  19 this: We're all about safety, but when we have  20 something where somebody hits an e-stop and we've  21 gone way above and beyond what the norm is and  22 there's \$100,000 worth of product loss, you're  23 going to hear about it.  24           And we can sit here and try to be  25 naive and say it doesn't have anything to do with</p>	<p style="text-align: right;">Page 139</p> <p>1 it, but when it hits the hill because the process  2 went down because we have one e-stop, you're going  3 to hear about it.  4           Thank you.  5           MR. BAUGHMAN: So to counter that  6 just a little bit, is that if we've got a process  7 that we've hit an e-stop and it kills three  8 boilers, we should have somebody on-site that's  9 going to be able to go in right quick, identify  10 the problem, separate out which boiler was the  11 problem, reset the e-stop, kill the boiler that  12 was the issue, and get everything back up and  13 running before there's an effect to the product  14 itself.  15           We shouldn't be in a position where  16 there's hours of downtime or even a half hour of  17 downtime. If we've got an emergency and somebody  18 hits it and kills everything -- but it's called an  19 e-stop because it's an emergency. It's not  20 something that's trivial. It's not something  21 that's come about because of just a random  22 nuisance issue. It's we've had a catastrophic or  23 something that's defined as an emergency. And so  24 from an operational standpoint, if it's not deemed  25 to be detrimental to humans, that can be reset,</p>
<p style="text-align: right;">Page 140</p> <p>1 the boiler identified, taken offline, and the  2 other boilers brought back up. So we shouldn't  3 have an issue, necessarily, I think, with  4 production. Although some processes don't like to  5 have a variance of anything on the steam end of  6 it.  7           But there's a lot of different  8 scenarios that I've thought about after reading  9 this on what I would have for a preference in my  10 own plant if I was production-minded. And yes,  11 we're weighing out dollars, we're weighing out  12 technical capabilities, and we're doing this  13 balancing. And we need to come back to what's the  14 most sensible thing from a safety standpoint to  15 addressing this equation.  16           And I just want to make sure that our  17 focus is within that. I understand the other  18 parameters. And we need to. But I also want to  19 take a look at this from the common sense  20 standpoint on what really makes the best sense  21 from a safety standpoint.  22           MR. TOTH: And I agree with that.  23 However, let's look back at the governing bodies  24 that spell out e-stops and have been around for  25 decades. If the intent was to say that all</p>	<p style="text-align: right;">Page 141</p> <p>1 boilers in a particular location in a particular  2 boiler room or within a vicinity have to be on one  3 e-stop, it would have been put in those codes.  4 And it's not. It's not been put in those codes,  5 because it's not going to generate more safety, in  6 my opinion. Okay? It's just going to restrict  7 the ability to test those controls, to make sure  8 that e-stop is cutting off Boiler Number 1.  9 Because I promise you if you put them all on one,  10 they're not going to test it, guys. They're not.  11           MR. HARGROVE: But maybe they  12 should, though.  13           MR. TOTH: I understand,  14 Mr. Hargrove. But let's be -- are we doing this  15 to increase safety? Is the increase of safety  16 because we have one e-stop outweighing the burden  17 or the potential of not being safe because we're  18 not going to test it?  19           We can tell them all day long. I can  20 tell them we can put five e-stops in there, and I  21 can train them all day long to test them. I'm not  22 going to be there.  23           We can only put it out there and say now  24 abide by it. I just think that in this case here,  25 I think we've overstepped it from years past.</p>

<p style="text-align: right;">Page 142</p> <p>1 Okay? There's some things that need to change and 2 there's a reasoning behind it. But in my 30-plus 3 years of experience in this industry, I don't see 4 this as being the one that we need to look at. 5           MR. BOWERS: And we can't put all 6 boilers in a package. You know, you've got some 7 boilers that can easily be restarted. But years 8 ago, I used to have Nissan and used to have 9 Vanderbilt, and they got three big coal burners 10 burning. You hit the e-stop and shut down three 11 coal burner boilers, then you've got problems. 12 Like Nissan, they don't have the coal burners no 13 more. But when you shut down these huge boilers, 14 they're just not easily restarted. It just takes 15 a lot of work. And you only want to get the 16 object that's the problem. You don't want to shut 17 down your whole plant. 18           Yes, I agree with safety a hundred 19 percent, and if you don't know what the situation 20 is and you've got three e-stops, you hit all three 21 of them. 22           CHAIRMAN MORELOCK: Well, like you 23 said, if all of your three or four boilers are in 24 one room and one is the problem and you hit one 25 button and you shut them all down, that will work.</p>	<p style="text-align: right;">Page 143</p> <p>1 But you could also shut the one down that's the 2 problem and be bringing the one, two, three, four 3 up and let it be a seamless transition so you've 4 got all the time you need to fix what the problem 5 with Boiler 1 is. 6           MR. TOTH: This is a great example, 7 because I know Mr. Baughman does it as well, is 8 when we train these people, if I have an operator 9 that goes into a boiler room and everything looks 10 fine and dandy, but I look at the water level and 11 the water level on that boiler is out of sight 12 low, what do we teach them to do? Trip the 13 boiler, right? Tripping that boiler, there's no 14 need to trip the other two boilers that are in 15 that room, right? 16           But if I have one e-stop and I'm 17 teaching my people, hey, that thing is in a 18 low-fire condition, we've already established that 19 all we're going to do is trip the fuel from that 20 boiler, what's going to happen? Everything else 21 is going to do its job and that boiler is going to 22 come down. These other two boilers are operating. 23 But I've tripped it as I've left the boiler room 24 to make sure. 25           That's the way I teach my people. Do</p>
<p style="text-align: right;">Page 144</p> <p>1 you teach your people that way? 2           MR. BAUGHMAN: Yes. For one, I've 3 got a -- and that gets back to the issue on the 4 variance, which I've got a big issue with security 5 guards trying to -- and that's where part of this 6 is, and I'm envisioning a person that even though 7 they've been trained and they've gone through all 8 this and that and one thing or another, I've had 9 enough meetings with them after their training and 10 so forth to know the level of being uncomfortable. 11           And we've got so many people that 12 have been through either yours or mine or others 13 that still feel uncomfortable. And we're giving 14 the authority in so many of these installations to 15 people that -- we're passing this and we're saying 16 yes, they're supposed to be competent and they're 17 being trained. And I don't personally feel that 18 all of these people are. And so because of that, 19 I'm trying to look at the overall picture. And I 20 agree with virtually everything that's been laid 21 out here, and I'm in a quandary about it myself 22 because I can understand both sides of it. 23           My personal end of it is if there's 24 something going on that's catastrophic, I just 25 want to hit one and be done with it and boom.</p>	<p style="text-align: right;">Page 145</p> <p>1 There's probably a remote station that has 2 individual e-stops, and that comes into play where 3 they can kill an individual boiler without killing 4 everything from this remote station. The multiple 5 boilers being affected by one e-stop are at the 6 point of pedestrian egress. So we're not saying 7 it affects the remote station. The remote station 8 still has individual e-stops that are identifying 9 each separate boiler. And we're not talking about 10 tying them in to where when you hit one it kills 11 all. We're just talking about the ones that are 12 at the point of pedestrian egress. And so we've 13 got the means of killing a separate boiler if 14 we've got a remote panel. Not every installation 15 is going to have a remote panel. 16           MR. TOTH: Most don't, obviously. 17           MR. BAUGHMAN: So yeah, I'm a bit 18 conflicted with it, personally. 19           MR. O'GUIN: Some other things to 20 consider is it's not always going to be a boiler 21 operator hitting that e-stop. You could take a 22 regular employee that knows nothing about a boiler 23 and just happened to be going by the boiler room 24 and there's something acting crazy, are they going 25 to actually stand there and hit every button or</p>

<p style="text-align: right;">Page 146</p> <p>1 are they going to hit one button and run? They 2 don't know anything about a boiler. 3           Because when you hit that one button, 4 what are we talking, five minutes, probably going 5 to be in safe mode, go back in there and cut all 6 the boilers off, energize them and figure out 7 which one was giving the issue, fire the others 8 back off. 9           We have a chemical plant that 10 contains Agent Orange. They have a process in 11 place. If they go down, they can sustain -- they 12 have a policy to start where they don't lose that 13 whole line that they can't lose pressure on. And 14 yes, we did test the e-stop. 15           MR. TOTH: Yeah. But the thing is, 16 is what you can't do -- and I understand it -- is 17 when you write code and when you write rules and 18 regulations, you've got to be really careful with 19 taking one example. You've got to be really 20 careful with that. Because when you do, you're 21 going to affect somebody else that doesn't operate 22 that way. So where I'm at with this is, this is a 23 situation or this is a process of installing 24 e-stops that hasn't changed in the code for years. 25 Why? Because it doesn't need to change. It's</p>	<p style="text-align: right;">Page 147</p> <p>1 been there and it's been addressed. 2           Now, there are some that we've seen 3 in codes that need to be changed, and those are 4 changed within the codes through the 5 interpretation process or the code case process. 6           CHAIRMAN MORELOCK: Or take out a 7 code item and change the book. 8           MR. TOTH: Or take out -- yeah, 9 take out a code item and get it changed. 10           This is a situation here that, in all 11 my years, I have not seen a problem until 12 recently. And it does cause an issue, and I am 13 worried about it. Because of the example that 14 Mr. Baughman mentioned in side discussion where he 15 went into a location and somebody had done some 16 work and the e-stops didn't work and the switches 17 to cut off the boilers didn't work. Okay? 18           And it's great if we have an 19 inspector there and then the inspector walks in 20 and says, "Okay. During my inspection, I want you 21 to show me that the e-stop works." Okay? But not 22 all inspectors are going to do that. They're not 23 going to be in that position to do that. 24           I want my clients to do that on a 25 regular basis. I don't want them to do it once a</p>
<p style="text-align: right;">Page 148</p> <p>1 year or once every two years. 2           CHAIRMAN MORELOCK: Well, and, I 3 guess, to Chris's concern, if you've got somebody 4 walking by the boiler and they -- if they're on 5 the 20-minute rule, that boiler attendant is going 6 to be checking that boiler every 20 minutes 7 anyway. So he should catch the problem pretty 8 quick. But if it's even on a remote, then you've 9 got a remote station with continuous monitoring, 10 and that guard, secretary, receptionist, whoever, 11 is going to get an enunciation on that panel that 12 the boiler is shutting down because there's a 13 problem, and then they hit the e-stop and they can 14 shut that down. And I just -- I mean, that's why 15 we approve those. We feel like that's a safe 16 thing to do. 17           If somebody is running out of the 18 plant, then that means something else is already 19 happening to where they're going to have to make a 20 decision to hit one button, three buttons, five 21 buttons, whatever. I would hope that it's not 22 just left up to that one person if they're going 23 by. I mean, there should be -- I mean, our whole 24 variance manual is built upon the safeguards to 25 make sure that people know what they're doing.</p>	<p style="text-align: right;">Page 149</p> <p>1 They have to respond within a minute or two 2 minutes or three minutes. 3           And so I think the way it's written 4 right now is -- will work. But it does put the 5 burden on the owner-user to make sure they've got 6 the programs in place to keep their plant safe. 7 Because it's not your job to make their plant 8 safe. Your job is to enforce the rules that they 9 are operating it safe. 10           So a lot of discussion. 11           MR. O'GUIN: You're opening this up 12 for every high-pressure boiler in the state, 13 right? It's not going to be just a variance. 14 Every high-pressure in the state is going to 15 have -- if they want multiple e-stops in the 16 boiler room, then that's what they're going to 17 have if we pass this interpretation period. 18           MR. TOTH: But if they just want 19 one, they can have just one. 20           CHAIRMAN MORELOCK: They can have 21 one. It's not -- 22           MR. FOX: Yeah. They can have just 23 one. It's going to leave it up to the owner. 24           MR. TOTH: Correct. They can have 25 just one if that's what they choose. My example</p>

<p style="text-align: right;">Page 150</p> <p>1 with Nokian Tyres, Nokian Tyres just wants one.  2 And -- because that's their choice.  3 MR. BAUGHMAN: And why do they want  4 just one? Do you know?  5 MR. TOTH: It's probably a cost  6 they didn't -- they were indifferent. When I  7 talked to their engineer, they're indifferent.  8 Because remember, they have -- they're going to  9 have three locations coming out of the boiler room  10 that's going to have e-stops. And so they do two  11 now. If they do two later, if they just --  12 because of their process -- because their process  13 is up and down. It's not a 24-hour...  14 And so when I asked them the  15 question, I said, "How do you want to design  16 this?" Because I did tell them -- because their  17 e-stops weren't in. They were going through the  18 process of installation, and so I forewarned them,  19 "I don't see your e-stops in yet. Let's make sure  20 we get those in." And I said, "By the way, you  21 can either do all four boilers" -- and this is  22 what I told them. I said, "You guys are going to  23 be putting in Boiler 3 and 4 in the very near  24 future. While you're going through the expense of  25 putting the e-stops in for 1 and 2, why don't you</p>	<p style="text-align: right;">Page 151</p> <p>1 just go ahead and run the conduit so you have your  2 stations there?" And I said, "However, you can  3 have one e-stop to kill all boilers." And I said,  4 "The only thing is, is testing it, you've got to  5 be able to test it. And we will put that in their  6 process and their training how they're going to  7 test that." And they were fine with it. You know  8 what? It's fine. We can work with production and  9 you know, when production is not up, that's when  10 we can test that. And I'll say, "That'll work  11 perfectly fine."  12 So now what are you looking at?  13 You're looking at installation costs for that.  14 You're keeping the same safety as you would if you  15 would have had four of them. And that was their  16 decision. And as their consultant, that's the way  17 that I pointed them towards it.  18 MR. BOWERS: And that's why I  19 agree. I said most places, because of money-wise,  20 they're going to only put one e-stop in there.  21 MR. TOTH: Yeah, just put one. But  22 there are some situations, there's an unnecessary  23 burden put on when the code really doesn't back  24 that up.  25 CHAIRMAN MORELOCK: Well, and just</p>
<p style="text-align: right;">Page 152</p> <p>1 to take that --  2 MR. TOTH: And also process --  3 CHAIRMAN MORELOCK: And just to  4 take that to the other extreme, we've seen  5 Domtar's manual for their boiler internal  6 inspection variance. Domtar and Eastman are  7 similar in the fact that we don't have just panels  8 like this. We've got control rooms built in to  9 each of our power houses where each operator has a  10 line of sight with the boiler and a distributive  11 control system. So they are continuously  12 monitored. And so would you really want us to put  13 one e-stop on a system like that? Because I think  14 we're kind of overkilling it, as far as a control.  15 We don't worry about -- I mean, you know, we  16 can -- if you said you have to do one e-stop for  17 multiple boilers, no other options, I mean, you  18 can make a case why you wouldn't need to do that.  19 But I agree with Mr. Toth in the fact  20 that he's saying we're not saying that you only  21 have to have one. You can have one, or you can  22 have multiple e-stops. So we're not saying that  23 you have to put all your boilers on one e-stop.  24 We're saying that you can, but you don't have to.  25 Correct?</p>	<p style="text-align: right;">Page 153</p> <p>1 MR. TOTH: That's correct.  2 CHAIRMAN MORELOCK: Are we ready to  3 vote?  4 (No verbal response.)  5 CHAIRMAN MORELOCK: I'm going to  6 call the question. As presented here -- I'll read  7 it to you one more time -- Inquiry Number 5: "Is  8 it required for all high-pressure boilers  9 installed in a location, for example, a boiler  10 room, mechanical room, facility location,  11 et cetera, be electrically connected to a single  12 manually operated remote shut-down switch, for  13 example, e-stop, installed at all points of  14 pedestrian egress where the activation of the  15 switch shall actuate the master fuel trip relays  16 on all boilers within that location."  17 MR. BAUGHMAN: Is there any way to  18 defer this vote?  19 CHAIRMAN MORELOCK: Well, sure.  20 It's just going to hold up the interpretation from  21 being published, but...  22 MR. BAUGHMAN: I got it. Well, and  23 the only reason being is that I would like more  24 information from other sources. There again, I  25 know the code end of it, know other people within</p>

<p style="text-align: right;">Page 154</p> <p>1 the industry. But I really am conflicted on this,  2 in all honesty. I see both points of it. And I  3 want to make sure that whatever I vote is voted  4 with my best conscience and doing due diligence  5 and homework from my own standpoint. And I can  6 either abstain or I can put in more due diligence.  7           CHAIRMAN MORELOCK: You can. So  8 you're correct, you could abstain. You could  9 actually vote this down. But that's not going to  10 affect the four inquiries and responses we've  11 already voted.  12           MR. BAUGHMAN: Good. Okay.  13           CHAIRMAN MORELOCK: And we could go  14 ahead and finish the list, and what doesn't get  15 passed, we can bring it back in the December  16 meeting.  17           MR. BAUGHMAN: And that's just my  18 personal end of it, so thank you.  19           CHAIRMAN MORELOCK: Okay. So the  20 reply is, "No; however, this does not restrict the  21 owner-user from doing so if they so choose."  22           MR. HARGROVE: I motion to defer  23 Inquiry 5 until the next meeting.  24           MR. BOWERS: I second.  25           CHAIRMAN MORELOCK: Well, I've</p>	<p style="text-align: right;">Page 155</p> <p>1 already got -- let's see. Do I have a motion on  2 the floor to --  3           MR. BAILEY: No.  4           CHAIRMAN MORELOCK: No. Okay. So  5 that's fair enough.  6           MR. HARGROVE: So retract.  7           CHAIRMAN MORELOCK: No, no, no. So  8 your motion stands.  9           I've got a second. All in favor?  10 (Affirmative response.)  11           CHAIRMAN MORELOCK: Opposed?  12 (No verbal response.)  13           CHAIRMAN MORELOCK: Abstentions?  14 (No verbal response.)  15           CHAIRMAN MORELOCK: Not voting?  16 (No verbal response.)  17           CHAIRMAN MORELOCK: Okay. So we're  18 going to defer Inquiry and Reply Number 5 to  19 December.  20           Really good discussion.  21           MR. BAUGHMAN: It was a good  22 discussion.  23           CHAIRMAN MORELOCK: We'll defer to  24 the December meeting.  25           MR. BAUGHMAN: Thank you to</p>
<p style="text-align: right;">Page 156</p> <p>1 everybody.  2           CHAIRMAN MORELOCK: Okay. Going on  3 to Inquiry Number 6: "For a manually operated  4 remote shut-down switch where the boiler room door  5 is on the building exterior, is it allowable for  6 the switch to be located just inside the door to  7 the boiler room?"  8           The proposed reply is yes.  9           Any concerns, questions, comments?  10           MR. TOTH: Straight from the code.  11           MR. FOX: One thing, which Inquiry  12 Number 6 are we talking about? Because he's got  13 it worded differently in the next one.  14           MR. TOTH: We did the renumbering  15 there, Mr. Fox.  16           CHAIRMAN MORELOCK: We renumbered  17 the one below it to Number 7, and then the one  18 below that to 8.  19           MR. FOX: The first Number 6.  20           CHAIRMAN MORELOCK: And then the  21 last one is 9.  22           MR. TOTH: Thank you for bringing  23 that up again, Mr. Fox. I appreciate that.  24           CHAIRMAN MORELOCK: So any comments  25 or questions?</p>	<p style="text-align: right;">Page 157</p> <p>1           MR. BOWERS: I think we've been  2 doing this for a while, and this is official here.  3           CHAIRMAN MORELOCK: Okay.  4           MR. BOWERS: You know, you've got  5 schools, you've got hospitals. I think there's  6 someplace in the code -- I don't know where it's  7 at -- where it says you can actually put it inside  8 where -- or, I guess, put a tamper-proof box. But  9 I think it's -- this is a good one to actually put  10 inside.  11           CHAIRMAN MORELOCK: Okay. All  12 right. Any other comments?  13           MR. BAUGHMAN: Again, it should be  14 where the boiler room doors -- plural, because we  15 may have more than one point of egress out of a  16 building exterior. So there again, each one of  17 those would have a shut-off switch. So I think  18 that they're -- so let me ask you this: Is there  19 nomenclature required by code that is on the  20 outside of the building?  21           MR. TOTH: Yeah.  22           MR. BAUGHMAN: And so explain that  23 to me.  24           MR. TOTH: Well, initially, what  25 happens is the code will identify that the e-stop</p>

<p style="text-align: right;">Page 158</p> <p>1 needs to be on the external side of the boiler  2 room door. Okay? Now, what it does go on to read  3 is that if the door leads to the exterior of the  4 building, then the e-stop may be installed just  5 inside of the door.</p> <p>6           As to what Mr. Bowers was alluding  7 to, if it is installed external to the boiler  8 room, it needs to -- processes need to be put in  9 place to prevent tampering.</p> <p>10           MR. BAUGHMAN: Yes.</p> <p>11           MR. TOTH: It doesn't tell you what  12 you have to do. It just tells you that, you  13 know...</p> <p>14           MR. BAUGHMAN: And I understand  15 that. What I was asking was the notification,  16 just like something that says "Fire extinguisher  17 here," is there any requirement, then, on the  18 outside of the building that says "E-stop located  19 just inside the door." So in other words, an  20 operator or somebody, if there's an emergency,  21 doesn't necessarily know that there's an e-stop  22 inside the door.</p> <p>23           MR. TOTH: I hope they do.</p> <p>24           MR. BAUGHMAN: Well, I hope they  25 do, too.</p>	<p style="text-align: right;">Page 159</p> <p>1           MR. TOTH: Well, and that's the  2 point where we can't -- you can't legislate  3 ignorance. I mean, honestly. You've got to  4 assume that these people are qualified. Now, if  5 you're sitting there and you're saying, well, this  6 person may not know that there's an e-stop, well,  7 he shouldn't be the boiler operator. Okay?</p> <p>8           MR. BAUGHMAN: Well, and --</p> <p>9           MR. TOTH: I mean, I think you're  10 going -- I think we're ending up starting to go  11 down the rabbit hole of, you know, the next thing  12 you know, it's, like, well, I don't like the color  13 of that sign. There's nothing that stipulates  14 that.</p> <p>15           MR. BAUGHMAN: My problem with this  16 is, in particular, take the dry cleaning industry  17 where you have a lot of boiler rooms that are  18 external of the building itself. It's an exterior  19 building. And who is the boiler operator?</p> <p>20           MR. TOTH: It's usually the owner.</p> <p>21           MR. BAUGHMAN: No. It's usually  22 the person that's cleaning and doing the stuff.  23 It's not the owner. The owner is not there a lot  24 of the times.</p> <p>25           MR. TOTH: Well, whoever is</p>
<p style="text-align: right;">Page 160</p> <p>1 operating. I know what you mean.</p> <p>2           MR. BAUGHMAN: Right. So the thing  3 with it is, is that -- and it gets down to there's  4 very little training in these, even though they  5 are operating power boilers 5 horsepower above  6 15 psi. We have -- and I don't even know how many  7 variances have been approved within the dry  8 cleaning industry. And so we have a very low  9 amount of training, and we've got an external  10 boiler room that we've got an e-stop on the inside  11 of the room. And I just think that -- and I agree  12 there's so many installations where tampering is  13 the biggest thing; somebody goes by and hits the  14 e-stop. But there should be some identification  15 on the building, if it is on the inside that  16 identifies an emergency stop.</p> <p>17           But that's my only issue. The  18 tampering, I agree with. We've dealt with that  19 for years. But I have a problem with there not  20 being any identification on where that e-stop is  21 located. And the only way it's going to be  22 identified is by the code, it saying it has been  23 to be clearly identified as an emergency stop  24 switch, which is going to be inside of the room  25 itself.</p>	<p style="text-align: right;">Page 161</p> <p>1           MR. TOTH: And I see where you're  2 going with that, Mr. Baughman. But realistically,  3 the only people that are going to be hitting that  4 e-stop if it's, first off, located outside is  5 somebody that's going to be screwing with it and  6 messing with it. Okay? That's why you allow for  7 it to be installed on the inside. This is not  8 something new. This is straight out of the code.</p> <p>9           MR. BAUGHMAN: Uh-huh. I agree.</p> <p>10           MR. TOTH: And we just want to make  11 sure that you don't have someone -- what this is,  12 is this is ensuring that you don't have someone  13 that enforces something beyond what the code  14 allows. And if you're wanting for there to be a  15 placard somewhere that says "E-stop," that's --  16 you as a board body need to handle that.</p> <p>17           MR. BAUGHMAN: Okay. And I totally  18 agree. And I'm not discounting the e-stop being  19 inside the door. I'm not discounting that one  20 bit. My problem is with there not being any  21 identification. That's where my problem lies at.  22 So I'm not saying that -- and it gets away from  23 what we're really talking about here on the  24 inquiry. I'm just putting that as a sidebar to be  25 discussed somewhere along the way, that if we've</p>

<p style="text-align: right;">Page 162</p> <p>1 got an e-stop inside on an exterior boiler room, 2 that it needs to be identified where that e-stop 3 is at, both through training and through some type 4 of identification. 5 MR. TOTH: That's clearly up to 6 the -- 7 CHAIRMAN MORELOCK: We're not the 8 only jurisdiction that's battling that. So what 9 are other jurisdictions doing about that? That 10 would be interesting, you know, what are other 11 people doing to train. But again, if we have a 12 hazardous vapor release where I work, we've all 13 been trained where the temporary havens are, which 14 that's pretty easy to find, but we're also trained 15 that the HVAC exhaust fans and all that stuff are 16 supposed to automatically shut off. But we are 17 trained to go to make sure that they have been 18 shut off. And if they're not, where the e-stops 19 are for them, to shut them off. And it goes back 20 to training. I mean, you know, so... 21 MR. TOTH: It goes back to 22 identification training, because when we look at 23 it, do we want individuals that are not trained to 24 even go into the boiler room at all. 25 MR. BOWERS: That's what I was</p>	<p style="text-align: right;">Page 163</p> <p>1 going to get to, schools -- 2 MR. TOTH: You know, you don't want 3 people going in there -- if we know where the 4 e-stop is, it's the individuals that are 5 responsible for it. 6 Mr. Baughman, dealing with dry 7 cleaners has been the bane of our existence in the 8 boiler unit since the beginning of time. And 9 that's where the inspector really comes into play, 10 is the identification, taking those few minutes 11 when you're going out there inspecting and doing 12 the actual in-service inspection while the boilers 13 are operating, recognizing the knowledge of the 14 individual that's with you. 15 It's just -- you know, you start 16 putting placards on walls saying "E-stop inside," 17 that person that's operating a press in there, 18 unless they've been trained as a boiler operator 19 or a boiler attendant for that location, they 20 ain't going to hit that e-stop anyway. You know 21 that as well as I do. 22 MR. BAUGHMAN: Well, I disagree, 23 but that's all right. 24 MR. TOTH: Oh, we can. But I 25 promise you most of them are scared to death.</p>
<p style="text-align: right;">Page 164</p> <p>1 MR. BAUGHMAN: But if there is a -- 2 and the only reason, this one came up a few weeks 3 ago was this person at a dry cleaner that's at a 4 press, happened to see the big, red placard that 5 said "Emergency boiler shut-off switch," and hit 6 that switch. 7 MR. TOTH: Was it outside? 8 MR. BAUGHMAN: The switch itself? 9 No. The switch was inside the plant. 10 MR. TOTH: Because the issue is 11 that the code does require that it has to be 12 identified. There's no doubt about that. 13 MR. BAUGHMAN: Yeah. 14 MR. TOTH: It just does not say 15 that it has to be identified on the opposite side 16 of the wall. 17 MR. BAUGHMAN: Right. Well, and 18 that's my issue. This particular boiler room was 19 external, but they had mounted the e-stop inside 20 of the plant itself instead of the boiler room. 21 MR. TOTH: Okay. 22 MR. BAUGHMAN: And so if it had 23 been mounted in the boiler room itself, she 24 wouldn't have known anything. But it was inside 25 of the plant. So I guess my quandary with that</p>	<p style="text-align: right;">Page 165</p> <p>1 was that she would not have gone into the boiler 2 room itself, looked for the e-stop to hit it 3 inside of that room. 4 MR. TOTH: But if I may interject. 5 So in your opinion -- and it's not testing you on 6 this -- but in your opinion, did they have an 7 e-stop actually in the boiler room or directly 8 outside of the boiler room? 9 MR. BAUGHMAN: Inside of the plant. 10 MR. TOTH: Okay. They had it 11 inside the plant. So in your opinion, does that 12 follow the code? 13 MR. BAUGHMAN: As far as having an 14 e-stop at the point of egress? 15 MR. TOTH: Right. 16 MR. BAUGHMAN: No. 17 MR. TOTH: Right. So in other 18 words, it's great that they have that. It's above 19 and beyond. But they needed to have an e-stop in 20 that boiler room, too, or just outside that door 21 of that boiler room. 22 So it's really hard when we, again, 23 as I was saying, is take an individual and trying 24 to create code off of an individual situation. 25 Because it does need to be labeled.</p>

<p style="text-align: right;">Page 166</p> <p>1 If this board decides -- I'm not 2 against it. Don't get me wrong. But if this 3 board decides that you want to put something in 4 your rules that establishes e-stops even more, I'm 5 all for it. If it establishes how it's going to 6 be placarded or identified, I'm all for it. Just 7 put it down in writing.</p> <p>8 MR. BAUGHMAN: Sure. Well, and 9 there again, the issue is if there's anything 10 going on with the boiler, a fire, a gas leak or 11 what have you, we've got a switch inside of the 12 room to go and activate instead of being inside of 13 the plant. And there again, it gets into this 14 it's not a one-size-fits-all proposition.</p> <p>15 MR. TOTH: Oh, sure.</p> <p>16 MR. BAUGHMAN: And so I don't want 17 it to -- I just hate it for being the only e-stop 18 available if the customer says -- or if anybody 19 says we put it inside of the boiler room and 20 that's all we've got. We're good to go.</p> <p>21 I would say that it's something that 22 we can have in addition to another e-stop 23 available, but I'd hate for that to be the only 24 dog on e-stop --</p> <p>25 MR. TOTH: Oh, yeah. I mean, we</p>	<p style="text-align: right;">Page 167</p> <p>1 could go down the road of talking about how are 2 they enunciating their alarms? What's the 3 audible? What's the visual? If I have a boiler 4 room over here, yeah, they're on the 20-minute 5 rule, right? If they're on the 20-minute rule, 6 how do they know it was an alarm? See, we can go 7 down that road.</p> <p>8 CHAIRMAN MORELOCK: Well, but --</p> <p>9 MR. TOTH: But we're not because 10 that's -- yeah.</p> <p>11 CHAIRMAN MORELOCK: Anybody can 12 exceed what the code requires.</p> <p>13 MR. TOTH: Sure.</p> <p>14 CHAIRMAN MORELOCK: There's no 15 prohibition against that.</p> <p>16 MR. BOWERS: We have 160, 170 metro 17 schools with boiler rooms. If we had e-stops 18 outside the door, we would have 160, 170 shut down 19 boilers.</p> <p>20 MR. TOTH: Oh, absolutely. You can 21 put all kind of tamper-resistant and it don't 22 matter. They're going to get to them.</p> <p>23 MR. BAUGHMAN: Chewing gum, you 24 name it.</p> <p>25 CHAIRMAN MORELOCK: It's just like</p>
<p style="text-align: right;">Page 168</p> <p>1 fire alarms, right?</p> <p>2 MR. TOTH: I never pulled one of 3 those.</p> <p>4 CHAIRMAN MORELOCK: Okay. So 5 before Mr. Toth incriminates himself, are we ready 6 to vote on Inquiry 6 and Reply 6?</p> <p>7 (No verbal response.)</p> <p>8 CHAIRMAN MORELOCK: Any more 9 comments?</p> <p>10 (No verbal response.)</p> <p>11 CHAIRMAN MORELOCK: Okay. I'm 12 going to call the question. All in favor say aye.</p> <p>13 (Affirmative response.)</p> <p>14 CHAIRMAN MORELOCK: Opposed?</p> <p>15 (No verbal response.)</p> <p>16 CHAIRMAN MORELOCK: Abstentions?</p> <p>17 (No verbal response.)</p> <p>18 CHAIRMAN MORELOCK: Not voting?</p> <p>19 (No verbal response.)</p> <p>20 CHAIRMAN MORELOCK: All right.</p> <p>21 Moving on to Inquiry Number 7. "For a manually 22 operated remote shut-down switch where the boiler 23 room door is on the exterior" --</p> <p>24 MR. BAILEY: Interior.</p> <p>25 CHAIRMAN MORELOCK: Do what?</p>	<p style="text-align: right;">Page 169</p> <p>1 MR. BAILEY: This one is interior.</p> <p>2 MR. BAUGHMAN: For Number 7, where 3 the boiler room door is on the building interior.</p> <p>4 CHAIRMAN MORELOCK: Did I skip -- 5 this is it right here, right? Because we just 6 voted that one. So I'm right, correct?</p> <p>7 MR. BAUGHMAN: We're right here 8 (indicating). We changed that 6 to 7.</p> <p>9 CHAIRMAN MORELOCK: Yep. Right. 10 That's right. That's where I'm at.</p> <p>11 MR. BAUGHMAN: Okay.</p> <p>12 CHAIRMAN MORELOCK: "For a manually 13 operated remote shut-down switch where the boiler 14 room door is on the building exterior" --</p> <p>15 MR. BAUGHMAN: Interior.</p> <p>16 MR. O'GUIN: Ours is interior.</p> <p>17 CHAIRMAN MORELOCK: Oh, interior. 18 Sorry. Okay. Thank you. Okay -- "leading to a 19 place of assembly or foot traffic and subject to 20 tampering, is it allowable for the switch to be 21 located just outside the door to the boiler room?"</p> <p>22 Proposed reply is yes.</p> <p>23 MR. BAUGHMAN: That would be just 24 inside the door to the boiler room.</p> <p>25 CHAIRMAN MORELOCK: Yes. And this</p>

<p style="text-align: right;">Page 170</p> <p>1 really ties into the conversation we've just been 2 having about the schools and all that.</p> <p>3 MR. TOTH: With the schools, 4 absolutely. Because the code only specifically 5 states inside the door when in reference to an 6 exterior door, this is allowing for those. 7 Because we've all experienced it where there's 8 foot traffic, somebody has bumped it, somebody has 9 messed with it, somebody has done something. So 10 now we're allowing -- or you're allowing -- so it 11 had the same amount of safety, but you're allowing 12 for it to be on the exit.</p> <p>13 CHAIRMAN MORELOCK: Right.</p> <p>14 MR. BAUGHMAN: And it will be on 15 each door again.</p> <p>16 MR. TOTH: Each door.</p> <p>17 CHAIRMAN MORELOCK: Yeah. Okay. 18 Comments/questions?</p> <p>19 (No verbal response.)</p> <p>20 CHAIRMAN MORELOCK: All right. 21 I'll call the question.</p> <p>22 MR. BAILEY: Don't you need a 23 motion?</p> <p>24 CHAIRMAN MORELOCK: I do need a 25 motion.</p>	<p style="text-align: right;">Page 171</p> <p>1 MR. FOX: I make a motion we vote 2 on Number 7.</p> <p>3 CHAIRMAN MORELOCK: Do I have a 4 second?</p> <p>5 MR. BOWERS: Second.</p> <p>6 CHAIRMAN MORELOCK: All in favor 7 say aye.</p> <p>8 (Affirmative response.)</p> <p>9 CHAIRMAN MORELOCK: Opposed? 10 (No verbal response.)</p> <p>11 CHAIRMAN MORELOCK: Abstentions? 12 (No verbal response.)</p> <p>13 CHAIRMAN MORELOCK: Not voting? 14 (No verbal response.)</p> <p>15 CHAIRMAN MORELOCK: Okay. 16 Sorry, Mr. Bailey. I thought we made 17 a motion to go through them individually. But I 18 can do individual motions as well.</p> <p>19 MR. BAILEY: Oh, well, you may 20 have. It's been a while.</p> <p>21 CHAIRMAN MORELOCK: Okay. Moving 22 along to Inquiry Number 8, "When an existing 23 high-pressure boiler installation does not include 24 a manually operated remote shut-down switch, is it 25 required that these switches be retroactively</p>
<p style="text-align: right;">Page 172</p> <p>1 installed, two boilers installed in the state of 2 Tennessee?"</p> <p>3 And the proposed reply to Inquiry 4 Number 8 is no.</p> <p>5 Questions/comments about that?</p> <p>6 MR. BAUGHMAN: There again, we're 7 defining this specifically back to high-pressure 8 boiler installations and not being inclusive to 9 others, correct?</p> <p>10 MR. TOTH: (Nods head.)</p> <p>11 MR. BAUGHMAN: Okay. And so if we 12 want to include low-pressure boilers, we're going 13 to take that as a separate inquiry.</p> <p>14 CHAIRMAN MORELOCK: Yes.</p> <p>15 MR. BAUGHMAN: Okay.</p> <p>16 CHAIRMAN MORELOCK: And that's what 17 we agreed to do -- yes.</p> <p>18 MR. BOWERS: So the situation 19 there, we have been, at one time -- as I talked 20 about before, one time we said anything before 21 2006 we kind of grandfathered in unofficially. So 22 are we going to set up a cut-off date on this or 23 are we just going to leave it?</p> <p>24 Anything, actually, put in since 2006 25 is supposed to have an e-stop. So are we talking</p>	<p style="text-align: right;">Page 173</p> <p>1 about boilers pre-2006?</p> <p>2 MR. TOTH: If I may interject, 3 Mr. Chairman. Again, my reply is not my personal 4 opinion about this. It's the reply that comes 5 from the NBIC for retrofit.</p> <p>6 MR. BOWERS: Section F.</p> <p>7 MR. TOTH: Right. E-stops should 8 have been installed the whole time. Okay? 9 That's -- where we're getting back to that 2006 10 was when we implemented -- and we can go back 11 through and look at the board minutes from 2006 12 and see when the installation permit was required.</p> <p>13 My suggestion to the board would be 14 to do that, find that date, and then any boiler 15 installed after that date of the permit 16 requirements has to have an e-stop. If it was 17 installed prior to that, you could -- hey, again, 18 guys, I'm all for it. If you go out there and you 19 find a high-pressure boiler out there or even a 20 low-pressure boiler -- but in this case, we're 21 talking about a high-pressure boiler -- that don't 22 have an emergency stop, absolutely put one in 23 there. But boy, that's hard to enforce.</p> <p>24 MR. FOX: That's the way I feel for 25 any high-pressure boiler in the state of Tennessee</p>

<p style="text-align: right;">Page 174</p> <p>1 should have an e-stop.</p> <p>2 MR. TOTH: Yeah. It's just hard</p> <p>3 to --</p> <p>4 MR. BAUGHMAN: And the other --</p> <p>5 MR. TOTH: And if you want to do</p> <p>6 that, you're going to set precedence and you're</p> <p>7 going to -- yeah.</p> <p>8 CHAIRMAN MORELOCK: So what if you</p> <p>9 worded it that any boiler installed prior to the</p> <p>10 Tennessee Rule 0800-3-3 requirement to have an</p> <p>11 installation permit would be grandfathered or</p> <p>12 whatever. But any boiler installed that required</p> <p>13 an installation permit, you have to have those</p> <p>14 e-stops.</p> <p>15 MR. TOTH: How about I do this:</p> <p>16 Since we are already coming back in December --</p> <p>17 CHAIRMAN MORELOCK: Do you want to</p> <p>18 defer this one, too, and work on it?</p> <p>19 MR. TOTH: Yes. And the reason why</p> <p>20 I say that is, Number 1, we're going to work on an</p> <p>21 interpretation, and I'll work on submitting</p> <p>22 something having to do with low-pressure boilers</p> <p>23 and the new changes.</p> <p>24 CHAIRMAN MORELOCK: Okay.</p> <p>25 MR. TOTH: On top of that, we have</p>	<p style="text-align: right;">Page 175</p> <p>1 tabled Inquiry Number 5.</p> <p>2 CHAIRMAN MORELOCK: That's correct.</p> <p>3 Well, until December.</p> <p>4 MR. TOTH: Right, until December.</p> <p>5 What I would like to do is let's go</p> <p>6 back and kind of look at what Mr. Bowers was</p> <p>7 saying about the permit installation. I'm with</p> <p>8 Mr. Fox on this. I'm all for and I enforced it in</p> <p>9 the past. When I was sitting in that seat right</p> <p>10 there, they said I walked up on a boiler and they</p> <p>11 just -- we're going to put in e-stops. I want to</p> <p>12 see some e-stops here.</p> <p>13 But right now, what we have in place,</p> <p>14 the practices, anything after the implementation</p> <p>15 of the installation permit is required to say</p> <p>16 we're going to have an e-stop.</p> <p>17 MR. BAUGHMAN: And let me add</p> <p>18 something. We adopted ASME CSD-1 quite a few</p> <p>19 years ago.</p> <p>20 MR. TOTH: Way back.</p> <p>21 MR. BAUGHMAN: Way before 2006's</p> <p>22 permits.</p> <p>23 MR. TOTH: There you go. That's a</p> <p>24 good thought.</p> <p>25 MR. BAUGHMAN: So the 2006, in my</p>
<p style="text-align: right;">Page 176</p> <p>1 mind, doesn't necessarily come into play as a</p> <p>2 number as does ASME, which we adopted already</p> <p>3 which mandates the e-stops. So I don't even think</p> <p>4 that this needs to have a deferral, personally. I</p> <p>5 think that it's pretty commonsense to all of us</p> <p>6 that any installation, whether it's a 1912, which</p> <p>7 even, to me, would mandate even more so that an</p> <p>8 e-stop be put in rather than giving a deadline of</p> <p>9 a date moving forward.</p> <p>10 MR. TOTH: Well, let me --</p> <p>11 MR. BOWERS: But going back to</p> <p>12 that, CSD-1 is only going to go to 12,500, which</p> <p>13 is, you know, 12,500,000 --</p> <p>14 MR. TOTH: Less than 300.</p> <p>15 MR. BOWERS: -- which is only going</p> <p>16 to go to about 400 horsepower, maybe, something</p> <p>17 like that, 300 horsepower. So anything over</p> <p>18 300 horsepower goes to NFPA 85, which they're kind</p> <p>19 of vague on that.</p> <p>20 MR. TOTH: They're actually not.</p> <p>21 MR. BOWERS: Okay.</p> <p>22 MR. TOTH: It's just CSD-1 tends to</p> <p>23 read a little bit easier. Okay? You've got to</p> <p>24 really look at that NFPA 85. Here is the dilemma</p> <p>25 that you're going to run into, okay, is that those</p>	<p style="text-align: right;">Page 177</p> <p>1 boilers were inspected. They were put into place.</p> <p>2 We're saying CSD-1 has always required it. I</p> <p>3 agree 100 percent. But we also did not have the</p> <p>4 permitting process in place before.</p> <p>5 So now you're going to go back -- and</p> <p>6 I'm just playing devil's advocate here. Now</p> <p>7 you're going to go back and you're going to walk</p> <p>8 in there, and somebody that's been there for</p> <p>9 20 years, okay, prior to 2006, and you say, "We</p> <p>10 need to have e-stops in here and you need to go</p> <p>11 through that expense." That is hard. That's hard</p> <p>12 to enforce.</p> <p>13 And so when we look at it and we say</p> <p>14 okay, let's stop the bleeding. And by that we</p> <p>15 say, "We knew we had something in place that said</p> <p>16 a set of eyes should have been on this from the</p> <p>17 state of Tennessee to find the e-stops since 2006.</p> <p>18 You should have had one. If you don't, we're</p> <p>19 going to make you get one." And then advise --</p> <p>20 and then if -- Because we all know that when you</p> <p>21 start tearing down that boiler and you have major</p> <p>22 repairs to it, that's the time when you're able to</p> <p>23 come in there and say, "Hey, we need to bring this</p> <p>24 up to code," right? "If you're not going to bring</p> <p>25 this up to code, we're going to condemn it."</p>

<p style="text-align: right;">Page 178</p> <p>1 That's usually been what the State's been able to 2 lean on in years.</p> <p>3           But I agree with you, Mr. Baughman. 4 I absolutely agree with you.</p> <p>5           MR. BAUGHMAN: Well, and then, I 6 mean, the -- and you bring up updating the CSD-1. 7 It just says whenever repairs are performed to the 8 boiler. It doesn't specify the amount of repairs, 9 what qualifies as a repair, is it a code repair 10 pressure vessel? Is it -- what qualifies as a 11 repair?</p> <p>12           But my end of it is, is that there's 13 so many times when we're in the boiler room itself 14 and we say, "Hey, we need to do this," and they 15 say, "We've been doing this for 20 years and the 16 inspector never made us do that." We deal with 17 that. And so I understand the devil's advocate 18 part of it. Put that out of play and get down to 19 the safety end of it. We need to have a means of 20 shutting the boiler off, regardless.</p> <p>21           And whether we put a grandfather in 22 that says, "If you don't have one already, we're 23 going to give you X amount of time," a year or 24 two, three years or whatever, I don't know. But 25 the point of it is, is that I can't see that being</p>	<p style="text-align: right;">Page 179</p> <p>1 valid when it comes down to safety.</p> <p>2           MR. TOTH: Perfect. Perfect. So 3 now your answer is, is it required? Yes. Easy. 4 So now you say yes. Now, when they come back, now 5 that's the discretion of the chief inspector when 6 they get it done. Because if they don't have an 7 e-stop, it's classified as a violation. Okay?</p> <p>8           MR. BOWERS: Now, going back to the 9 chief, he said -- I think it was, like, three 10 years ago we had a -- that it was enforceable. So 11 in the last three years, most inspectors have been 12 either getting e-stops put in or violations. 13 There's probably a lot of e-stop violations out 14 there right now. So we've been enforcing it for 15 the last three years, and a high-pressure boiler 16 gets inspected twice a year. So a lot of these 17 older boilers should have e-stops unless the 18 inspector isn't catching them. But I think a lot 19 of it's done.</p> <p>20           MR. TOTH: Well, then, 21 Mr. Chairman, I remove my recommendation. Just 22 change the reply.</p> <p>23           CHAIRMAN MORELOCK: To yes? 24           MR. TOTH: Say yes. Now, I would 25 be interested in seeing what the enforcing body</p>
<p style="text-align: right;">Page 180</p> <p>1 thinks about that. What does the chief and 2 assistant chief think about that? When you put 3 yes in here and then this is published and that 4 goes out, and now all your inspectors, all the 5 state inspectors, and the insurance inspectors, 6 they just got more teeth, if you would, to enforce 7 it. I love that. Are you guys ready? And think 8 about what's your time frame. That's internal. I 9 don't think that's something that the board, 10 necessarily --</p> <p>11           MR. CHAPMAN: Yes. 12           MR. TOTH: Yeah. Perfect. 13           MR. BAUGHMAN: Are you guys in 14 agreement on that?</p> <p>15           MR. CHAPMAN: Oh, yeah. Well, 16 because like Harold was saying over there, pretty 17 much all of them got them on already.</p> <p>18           MR. BOWERS: The chief made the 19 decision three years ago that this is what we were 20 going to do, and we've been doing it.</p> <p>21           MR. CHAPMAN: I don't think there's 22 any that's left out there now at the moment. You 23 know, I haven't been to every place.</p> <p>24           MR. TOTH: Watch that. You're on 25 the record now. But now you have it in writing.</p>	<p style="text-align: right;">Page 181</p> <p>1 It's not a verbal. It's there. Good.</p> <p>2           MR. CHAPMAN: Okay. 3           CHAIRMAN MORELOCK: Okay. So the 4 reply to Inquiry 8 has been changed from no to 5 yes. And do I have a motion to accept the change? 6           MR. BAUGHMAN: So moved. 7           MR. BOWERS: Second. 8           CHAIRMAN MORELOCK: All in favor 9 say aye.</p> <p>10           (Affirmative response.) 11           CHAIRMAN MORELOCK: Opposed? 12           (No verbal response.) 13           CHAIRMAN MORELOCK: Abstentions? 14           (No verbal response.) 15           CHAIRMAN MORELOCK: Not voting? 16           (No verbal response.) 17           CHAIRMAN MORELOCK: All right. So 18 that one is passed instead of deferred. 19           All right. So Inquiry 9, "In the 20 state of Tennessee, is a manually operated remote 21 shut-down switch required for installations of 22 boilers defined under Section 4 of the ASME code 23 for heating, low-pressure boilers? That's going 24 to be a separate item that Mr. Toth is going to 25 develop, and so we will not need to vote that</p>

<p style="text-align: right;">Page 182</p> <p>1 today.</p> <p>2 MR. BOWERS: Now, on that one</p> <p>3 there, we need to look at 3.5.3.2 on potable hot</p> <p>4 water heaters. Because that was --</p> <p>5 MR. TOTH: I'll take a look at</p> <p>6 that.</p> <p>7 CHAIRMAN MORELOCK: 3.5.4?</p> <p>8 MR. BOWERS: 3.5.3.2(b).</p> <p>9 MR. TOTH: Mr. Chairman, I will</p> <p>10 take a look at that, do a little bit more research</p> <p>11 on that for low-pressure boilers and have separate</p> <p>12 interpretation request on that.</p> <p>13 CHAIRMAN MORELOCK: Very good.</p> <p>14 Ladies, thank you for your incredible</p> <p>15 endurance. Everything on the back table is to</p> <p>16 honor you for this diligence.</p> <p>17 That takes us down to Open</p> <p>18 Discussion. And Doris Barnett will give us a</p> <p>19 quarterly update on the boiler computer system and</p> <p>20 Jurisdiction Online.</p> <p>21 MS. BARNETT: Currently,</p> <p>22 Jurisdiction Online is still in the testing phase.</p> <p>23 We started testing heavily a few weeks back. We</p> <p>24 discovered a few issues with the way that it's put</p> <p>25 together for us. And Jurisdiction Online is</p>	<p style="text-align: right;">Page 183</p> <p>1 working with us to resolve those. Primarily,</p> <p>2 we're looking at permitting and variances and</p> <p>3 wishes us well to make sure that they are going to</p> <p>4 be correct for us.</p> <p>5 The core processes, which is what</p> <p>6 they call the piece that they're going to prepare</p> <p>7 to deliver by the end of this month, does not</p> <p>8 include the ability to import the information from</p> <p>9 Hartford and Eastman. That's going to be</p> <p>10 delivered separately.</p> <p>11 Our timeline for the core process is</p> <p>12 at the end of this month, 9/30. And Hartford and</p> <p>13 Eastman is being developed under a separate</p> <p>14 charter and project and everything like that.</p> <p>15 We're looking at, at least, four months before</p> <p>16 that can be delivered.</p> <p>17 So we will not be using Jurisdiction</p> <p>18 Online in that interim, because it isn't fair to</p> <p>19 either Hartford or Eastman to have to go through a</p> <p>20 separate process. It isn't fair to the State of</p> <p>21 Tennessee to have to try to use that process. So</p> <p>22 we're going to defer the whole use of it until</p> <p>23 everything is ready.</p> <p>24 CHAIRMAN MORELOCK: So how will we</p> <p>25 report to the State?</p>
<p style="text-align: right;">Page 184</p> <p>1 MS. BARNETT: You will continue as</p> <p>2 is in the interim.</p> <p>3 CHAIRMAN MORELOCK: As is. Okay.</p> <p>4 MS. BARNETT: And we'll let</p> <p>5 everybody know when we're going to be switching</p> <p>6 over, especially Hartford and Eastman, because</p> <p>7 those are the two majorly impacted because they're</p> <p>8 not already a part of the Jurisdiction Online</p> <p>9 processing.</p> <p>10 And that's all I had for now. If</p> <p>11 there are any questions other than the Chairman's</p> <p>12 just now...</p> <p>13 MR. BOWERS: I know you've made</p> <p>14 several changes, because I use JOL. You've made</p> <p>15 several good changes along the way.</p> <p>16 MS. BARNETT: We try.</p> <p>17 MR. BOWERS: One suggestion is --</p> <p>18 of course, it's up to the chief -- where we have</p> <p>19 down heating surface, it doesn't really apply to</p> <p>20 unfired pressure vessels. We just have to come up</p> <p>21 with -- couldn't we also put a pull-down for cubic</p> <p>22 inches on there? Because that's what we kind of</p> <p>23 reference our code off of on unfired pressure</p> <p>24 vessels. You know, we determine 5 cubic foot is</p> <p>25 the size. Would that be a good change to put a</p>	<p style="text-align: right;">Page 185</p> <p>1 pull-down for cubic inches where it says heating</p> <p>2 surface? What do you feel about it?</p> <p>3 MS. BARNETT: Apparently, he is</p> <p>4 deferring the entire question to me. I think it</p> <p>5 would probably be a good proposal. I don't know</p> <p>6 if we can get it in -- I'm positive we can't get</p> <p>7 it in by the end of September.</p> <p>8 Whether or not we can have it</p> <p>9 delivered by the time the rest of the process is</p> <p>10 ready, we can put it on the proposal list.</p> <p>11 They've offered to let us have a list of</p> <p>12 additional things other than just Hartford and</p> <p>13 Eastman to be delivered at the end of that time</p> <p>14 frame. And so that's going to be an additional</p> <p>15 four months minimum.</p> <p>16 MR. BOWERS: It was just a</p> <p>17 suggestion.</p> <p>18 MS. BARNETT: So cubic inches?</p> <p>19 MR. BOWERS: Yeah. Where it says</p> <p>20 heating surface where we do unfired pressure</p> <p>21 vessels, the heating surface don't really fit into</p> <p>22 the criteria; where if you could put a pull-down</p> <p>23 for cubic inches, that would help us on that.</p> <p>24 MS. BARNETT: I've made a note of</p> <p>25 that.</p>

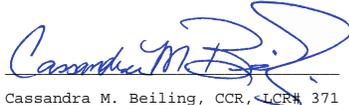
<p style="text-align: right;">Page 186</p> <p>1 CHAIRMAN MORELOCK: No, you'd want 2 cubic feet for pressure vessels, right? 3 MR. BOWERS: Yeah. 4 MS. RHONE: For unfired. 5 MS. BARNETT: I believe we've got 6 that already. 7 MR. BOWERS: I think the minimum is 8 5 cubic feet. 9 CHAIRMAN MORELOCK: So do we have 10 any information on this additional work for 11 Hartford and Eastman? Is there going to be 12 associated fees to upload our data into that? 13 MS. BARNETT: I do not have that 14 information right now. 15 CHAIRMAN MORELOCK: Okay. 16 MS. BARNETT: We're still working 17 on getting the entire addendum for the contract. 18 Right now, I don't know. 19 CHAIRMAN MORELOCK: Okay. All 20 right. Any questions or comments? 21 (No verbal response.) 22 CHAIRMAN MORELOCK: Thank you very 23 much for that update. 24 And Deborah is going to give us an 25 update on the 2019 and the 2020 Tennessee Boiler</p>	<p style="text-align: right;">Page 187</p> <p>1 Safety Conference. 2 MS. RHONE: Okay. Yes. The 2019 3 state boiler inspector training will be held 4 September the 23rd through the 27th in Gatlinburg 5 at Black Bear Inn and Suites. 6 This year's agenda is going to 7 include historical boiler training which will be 8 at Dollywood. We're going to have some NBIC 9 training, precision boiler training, Miura boiler 10 training, and, also, CO2 training, just a few of 11 the topics that will be included on the agenda. 12 And, also, for the 2020 boiler 13 inspectors safety training -- of course, that will 14 be open to state and deputy boiler inspectors -- 15 and that's going to be conducted in the fall of 16 2020. The actual conference date and the location 17 has not yet been determined. We are welcoming 18 suggestions for the location, as well as agenda 19 topics, presenters. 20 You know, last year when we had our 21 training, there were some suggestions about some 22 presenters. So we have those on file and we'll 23 also be contacting those individuals to see if 24 they're still willing to participate and be on the 25 agenda.</p>
<p style="text-align: right;">Page 188</p> <p>1 Also, this is going to be a great 2 opportunity in 2020 for companies to monetarily 3 support and participate with the boiler safety 4 conference by sponsoring or cosponsoring, let's 5 say, a refreshment break, a reception, the 6 banquet, items for the goody bag. Donations will 7 be welcomed. You can also make those donations 8 directly to the vendor or the venue. And 9 additional information regarding either of these 10 trainings, you may contact Chief Sam Chapman, 11 Assistant Chief Chris O'Guin or myself. 12 So we're excited about our training. 13 And thank you. 14 MR. TOTH: And is that for 2020? 15 MS. RHONE: 2020, yes. 16 CHAIRMAN MORELOCK: All right. 17 Very good report. 18 MR. BAUGHMAN: And not related to 19 JO or with the boiler conference, but I know that 20 we had some code updates, NBIC and so forth that 21 have come about recently. While we're here 22 together and just to kind of update me, I heard 23 that it's now mandated for carbon monoxide 24 detectors to be in each boiler room, so do we need 25 to address that in some conversation within our</p>	<p style="text-align: right;">Page 189</p> <p>1 next board meeting to make sure that information 2 is getting out? 3 MR. CHAPMAN: Yes. 4 MR. BAUGHMAN: Okay. Because I've 5 already starting talking to some. I just wanted 6 to make sure that we produce that information 7 going forward. Thank you. 8 MR. O'GUIN: Talking about the 9 carbon monoxide, the state fire marshal's office 10 does have a hold of that code now. And they are 11 working with our planning director to see if it's 12 something they can implement into the state fire 13 marshal planning side. It has to go through them. 14 So they are looking at that code as well. So they 15 may be able to help. 16 MR. BOWERS: It would be good if 17 they could come to our meeting in December, if one 18 of the fire marshals could come to our meeting. 19 MR. O'GUIN: Well, if they have 20 something back from it. They haven't come back 21 with any answers yet, as far as what they can do 22 to help. 23 MR. TOTH: I'm glad Mr. Baughman 24 mentioned that. That was on my to-do list, to put 25 in an interpretation on carbon monoxide and</p>

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1 actually oxygen monitoring. So it's kind of one  
 2 of those things that's going to be submitted. So  
 3 that may help. There are a lot of questions  
 4 coming up about that. And what can satisfy that.  
 5 CHAIRMAN MORELOCK: Well, if you  
 6 have something prepared, let's get it on the  
 7 December agenda.  
 8 MR. BAUGHMAN: When is the December  
 9 meeting?  
 10 CHAIRMAN MORELOCK: Good segue.  
 11 The next meeting will be December 11th at  
 12 9:00 a.m. right here at the Department of Labor  
 13 Workforce and Development building.  
 14 And Item 12 is adjournment. So thank  
 15 you-all for all of your input. It's a great  
 16 meeting, a lot of good information shared, a lot  
 17 of things that get vetted to make us safer. So  
 18 thank you for all the hard work. Thank you.  
 19  
 20 END OF THE PROCEEDINGS.  
 21  
 22  
 23  
 24  
 25

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C E R T I F I C A T E

1 STATE OF TENNESSEE )  
 2 COUNTY OF WILLIAMSON )  
 3  
 4 I, Cassandra M. Beiling, a Notary Public  
 5 in the State of Tennessee, do hereby certify:  
 6  
 7 That the within is a true and accurate  
 8 transcript of the proceedings taken before the  
 9 Board and the Chief Inspector or the Chief  
 10 Inspector's Designee, Tennessee Department of  
 11 Labor & Workforce Development, Division of  
 12 Workplace Regulations and Compliance, Boiler Unit,  
 13 on the 18th day of September, 2019.  
 14  
 15 I further certify that I am not related to  
 16 any of the parties to this action, by blood or  
 17 marriage, and that I am in no way interested in  
 18 the outcome of this matter.  
 19  
 20 IN WITNESS WHEREOF, I have hereunto set my  
 21 hand this 17th day of October, 2019.  
 22  
 23    
 24 Cassandra M. Beiling, CCR, LCR# 371  
 Notary Public State at Large  
 25 My commission expires: 3/15/2020

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